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MEDICAL INFORMATION AND ADVICE.



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BOOK OF  
MEDICAL INFORMATION  
AND ADVICE.

BY

J. WARBURTON BEGBIE, M.D.,  
F.R.S.E., ETC.



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[This Work, which has passed through several editions, was originally published anonymously; but the Publishers are now able to announce, by permission of Mrs. Warburton Begbie, that it was written by the late eminent physician, Dr. Warburton Begbie of Edinburgh; whose name will be a sufficient guarantee that its counsels are thoroughly practical, trustworthy, and founded on the highest scientific knowledge, and that its pages contain nothing empirical.]

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## PREFATORY NOTE.

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THE title probably sufficiently explains the aim and object of this little work. These are to communicate in the simplest possible terms such an amount of information regarding medical subjects as many intelligent persons of both sexes are constantly endeavouring to acquire, and which will further enable them to recognize, and safely to treat, the more common forms of diseases, when by chance, or owing to necessity or other circumstances, they are placed beyond the reach of the physician or surgeon.

The possession of a certain amount of elementary knowledge in physiology is, in the present day, considered nearly indispensable for every well-educated individual. The author is inclined to believe that an acquaintance with such subjects of medical and personal interest as are shortly considered in this book would operate in exalting that reliance which should at all times be placed on the opinion and advice of the accomplished medical man ; while, on the other hand, it would tend to diminish the eagerness—which has long been manifested, but is, perhaps, as conspicuous now as at any former period of the world's history—to take refuge in all varieties of quackery. In this persuasion, he has not, in all instances, limited himself to a simple description of the nature and treatment of diseases ; but has, more particularly under certain heads,—these the most likely to be consulted,—sought to interest the reader by a reference to various points of importance : such, for example, as the history and mode of origin and propagation of the malady under discussion. A minute account of some, and even a reference to

certain other affections have been avoided, owing to the diversity of characters they are at all times apt to present, and the difficulty, if not the impossibility, of offering explanations of these calculated to be useful, with anything like that brevity which the limits of this work demanded. Under many of the various heads, the opinions and practice of some of the most distinguished authorities have been referred to; while, in other places, advantage has been taken of these without making particular allusion either to them or their writings. This, it is hoped, will be excused in such a work as this, the publication of which, the author takes this opportunity of stating, is actuated by the single desire of its being useful. If it shall be found to have accomplished this end, he will be abundantly satisfied. It is of quite another kind of book that the Latin poet writes, "*Victurus genium debet habere liber.*"

The work is divided into Four Parts and an Appendix, as follows :—

PART I. contains a brief Description of the more Common Diseases and their appropriate Treatment (arranged in alphabetical order).

PART II. contains Hints to be followed in Cases of Emergency,—Bleeding, Drowning, Poisoning, &c. (also arranged in alphabetical order).

PART III. contains Advice regarding the Management of the Sick-room, including the preparation and application of certain remedies, &c.

PART IV. contains Suggestions as to the Preservation of Health,—Diet, Exercise, Sleep, &c.

The APPENDIX contains a List of Common Medicines and Medical Appliances, with information as to their employment.



# MEDICAL INFORMATION AND ADVICE.

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## PART I.

### BRIEF DESCRIPTION OF THE MORE COMMON DISEASES AND THEIR APPROPRIATE TREATMENT.

ARRANGED IN ALPHABETICAL ORDER.

**ABSCCESS** (from the Latin verb *abscedo*, hence *abscessus*), a collection of purulent matter, or pus, in any part of the body, the result of inflammation. The tendency of matter so formed is to gain the surface, in the neighbourhood of which, by a distinctive feeling of fluctuation, its existence is recognized.

The application of warmth, as by fomentation or poultices, favours the progress of an abscess. Incisions made with the lancet or knife are generally required to give the purulent matter free vent.

Under their distinctivé heads, certain varieties of abscess will be described.

**APHONIA** (from the Greek *a*, *phone*), loss of voice, may be partial or complete, temporary or lasting, and the result of various morbid conditions. Many persons are peculiarly subject to loss of voice from exposure to cold.

For its relief, confinement to the house, or to bed, if accompanied by feverish symptoms, is required. The inhalation of the steam of hot water, and application of mustard over the throat, are useful remedies.

Persons who exercise the voice much and loudly, frequently suffer from aphonia; it is one of the most prominent symptoms in the so-called clergyman's sore throat.

**APOPLEXY** (from the Greek *apoplexia*), literally stupor, coma, or a condition of profound insensibility, coming on suddenly, or at least rapidly. A person in apoplexy seems as if in a deep sleep, but from this he cannot be roused; the pulse beats, and the face, for a time at least, is much flushed; the breathing is laboured, and accompanied by a peculiar snoring sound called stertor; the cheeks are puffed out during each expiration; the limbs are motionless—if one is raised, it again falls like the limb of a person already dead. In some cases of apoplexy the patient cannot swallow; fluids introduced into the mouth appear to choke, or they run out at the corners of the lips; but a small quantity introduced into the back of the mouth is generally swallowed.

When the symptoms which have been mentioned, and others to which it is unnecessary to allude, are present in a marked degree, and continue, the probability is that their occurrence depends upon the rupture of a blood-vessel within the brain, and the extravasation, to a greater or less extent, of its contents. Similar symptoms, however, may depend upon what is called determination of blood towards the head, or detention of blood within the head, exercising great pressure upon the substance of the brain. Apoplexy also results from the sudden obstruction of one of the leading arteries of the brain; and it occurs in the progress of certain diseases in which the blood itself is impure or poisoned,—as, for example, in certain diseases of the kidneys. These symptoms are very appalling; and though recovery from them sometimes occurs, a fatal termination is to be apprehended. Certain persons are more subject to attacks of apoplexy than others; those after the middle period of life who are stout, short-necked, and full in habit, who indulge freely either in eating or drinking, are most prone.

In the case of a person affected with apoplexy, let the clothes be removed, or at all events loosened, and specially

those in the neighbourhood of the neck and throat; let the head be raised above the level of the body; and let cold, by means of thin pieces of cloth dipped in cold water, and speedily changed, be applied to the head. In such circumstances the assistance of a medical man is eminently required; but should this be unattainable, an injection should be administered, containing oil of turpentine, or turpentine and castor oil, with warm gruel, in the proportions mentioned in the Appendix; or, if the pulse be not feeble, a drop of croton oil, well mixed with olive oil or with cream, should be put into the back of the mouth. These means having been used, assurance may be felt that the remedies most approved in the science of medicine have been employed, and, for a time, the result must be awaited. The introduction of the catheter and withdrawal of the urine from the bladder may be practised.

Many cases of apoplexy prove fatal in a very brief period, within a few hours of the stroke; sometimes, however, several hours, or even a day or two, may elapse. A diminution in the degree of stupor, the opening of the eyes, movement of a limb, an articulate sound or even moan, made by the patient, may be regarded as favourable symptoms, the evidences of returning sensibility. In fatal cases, a cold clammy sweat almost invariably covers the whole body, before their sad ending.

The state of apoplexy may be mistaken for that condition of insensibility which is produced by intoxicating liquors, or by narcotic poisons such as opium. Under the head of *Insensibility produced by Intoxicating Drinks* (p. 232), and under the head of *Poisoning by Opium* (p. 234), the distinguishing marks of these states will be found.

**ASTHMA** (from the Greek *asthma*), literally a panting, a disorder of respiration, occurring at all periods of life, though more common in adults, not unfrequently hereditary. Asthma is a complex complaint, having for its production various causes. Except when connected with certain organic changes in the heart and lungs, asthma is essen-



tially an intermittent affection; for its sufferers may, and often do, for a time, enjoy complete immunity from it, as well as a fair share of good health. It is generally characterized by cough, tightness about the chest, and difficult breathing, attended by a peculiar wheezing noise, the latter more observable when the person affected expires than while he is drawing in a breath.

In those who suffer from asthma, a fit of difficult breathing is very frequently caused by some error in diet, or by change of residence; for peculiarities in the atmosphere seem to act as the exciting causes, as well as, in many instances, the remedial means, in asthma. Various kinds of asthma, as *Hay Asthma* (p. 132), will be described under their distinctive names.

The sufferer from Spasmodic Asthma—the name commonly applied to attacks of difficult breathing (or dyspnœa), unconnected with organic disease in the lungs or heart—should at all times be very careful in regard to diet; such articles of food alone should be taken as are most easily digested, and a strict avoidance of those which experience has proved to be injurious in their particular case should be practised. In not a few individuals, attacks of the malady are induced by impressions produced on the nervous system; sudden and violent emotions, for example. These, by persons so predisposed, should be avoided.

When an attack has occurred, its severity will be frequently mitigated by the exhibition of one or other of the most approved anti-spasmodic remedies, as chloric ether, or chloroform; the former in doses of thirty to sixty drops; the latter, five to fifteen drops. The burning of nitre paper, or the use of cigarettes of stramonium, or in severe cases the subcutaneous injection of morphia, frequently affords rapid relief. A mustard poultice, applied over the front of the chest, often brings relief. A dose of laxative medicine, too, is likely to be useful. Many sufferers are relieved only by a free expectoration of phlegm from the bronchial tubes; and in such cases, remedies which tend to hasten this effect do good. The author has had some patients under his

care, for whom a laxative is always first prescribed; and after its operation, a solution of tartar emetic, of which one-sixth of a grain is given, till a free expectoration follows; usually this supervenes in from eight to twelve hours, and then complete freedom in breathing returns.

The gouty are sometimes affected with spasmodic asthma; they specially require to regulate the stomach.

**ATROPHY** (from the Greek *α*, *trephe*), a wasting or consuming away—a term still in use in the Registrar-General's tables, though indicating a condition of diseased action, rather than a disease itself.

Very many diseases are accompanied by atrophy to a greater or less extent; in not a few of these the causes are already sufficiently well known. There occur, however, from time to time, cases in which the most diligent, careful, and repeated examination fails to detect any disease of vital organs, though it is more than probable that some important viscus is affected. To such cases the term atrophy is, perhaps, in the present state of knowledge, not inappropriately applied. From such a condition recovery may or may not take place. The more lasting it is, of course so much the more unfavourable is the issue likely to be.

In its treatment the employment of all those means which tend to improve the general health of the patient is required,—nourishing diet, invigorating air, the use of cod-liver oil, glycerine, the various preparations of steel, &c. (See Appendix.)

**BILE**, including **BILIOUS HEADACHE**, **BILIOUS FEVER**, **BILIOUS DIARRHŒA** (the term bile is derived from the Latin *bilis*). The disordered function of the great secreting organ the liver gives rise to many ailments, which, more generally than perhaps truthfully, are in the popular acceptation ranged under the head of bile. What is meant by these several terms is, that the affections indicated are to be attributed to an increase, diminution, or alteration in the secretion of bile by the liver. Bile is a peculiar animal fluid, of

a yellow or greenish colour, which, when secreted by the liver, either passes directly through the hepatic duct into the upper part of the bowels (duodenum), or, remaining for a time in the gall-bladder, a receptacle for the bile attached to the liver, thence passes by the cystic duct.

That form of headache to which the term *BILIOUS HEADACHE* is applied, though often connected with alteration of the hepatic function, is also frequently dependent on disorder of the stomach. It is characterized by a dull, heavy feeling, rather than of acute pain, in the head, chiefly in the forehead, over the eyes, and in the eyes themselves. These organs, if pressed upon or turned upwards, are found to be very painful. There is often giddiness, always great languor and depression, and a tendency to drowsiness and sleep, which, though deep, is not refreshing. The conjunctivæ, or white portions of the eyes, are sometimes slightly jaundiced. There is very generally nausea and sickness; and after continuing for a longer or shorter time, the attack is not uncommonly terminated by vomiting of green bile, often in considerable quantity. The bowels, in such circumstances, have most probably been irregular for some days previously, perhaps obstinately confined.

Many persons suffer from frequently recurring attacks of bilious headache; while others, by a careful attention to diet and regimen, contrive to ward them off. Those who are apt to be thus affected should exercise great caution in the matter of food. All rich articles should be avoided,—such are by no means badly named bilious; nor should less care be exercised in regard to what is chosen for drink. Bilious subjects must learn to avoid highly dressed meat—stews and such like, pastry, and malt liquors. Plainly dressed and well-cooked meat, and not much of it; farinaceous food; and for drink, a glass of sherry wine in water,—the lighter wines are more suitable. As to tea and coffee, they sometimes disagree with such persons, and if so, milk or cocoa may be substituted. The bowels must be carefully regulated. It is surprising how much may be done in this way without having recourse to medicine. By due attention to diet and



regimen, the healthy action of the alimentary canal may often be maintained. (See, on this subject, remarks in Part IV., p. 242.)

For the relief of the headache, however, a dose of laxative medicine will generally be found indispensable; let it be of salts, or salts with senna, or of compound rhubarb (Dr. Gregory's) powder (see Appendix); let cold be applied over the forehead; and, while the headache lasts in a severe form, let the patient practise abstinence. When the headache has departed, if appetite speedily returns, as it sometimes does in a keen degree, let there be indulgence to a limited extent, and, for a time, only in what is simple and of easy digestion.

**BILIOUS FEVER.**—A form of fever accompanied by symptoms which indicate derangement of the hepatic function, such as vomiting of biliary matter, the existence of tenderness or tumefaction over the liver, and a yellow colour over the surface of the body, may be called bilious. Fevers thus characterized are more common in warm than in temperate climates. Certain epidemics, however, of fever in this country have, at different times, manifested a tendency to present these symptoms. Under the head of *Fever* a further reference to this subject, and especially as regards treatment, will be found.

**BILIOUS DIARRHŒA** (see *English Cholera*, p. 30).—Before passing from this subject, a word may be added in regard to that ailment from which young children—particularly those who are subsisting entirely, or almost so, on a milk diet—are prone to suffer; an ailment characterized chiefly by an altered condition of the stools, their pale or even white appearance, owing to deficiency of bile. This state depends on an imperfect action of the liver. In such the tongue is generally white. Sickness and thirst are other symptoms. This condition is best treated by the employment of alterative remedies; and of these the gray powder (Hydrargyrum cum creta, see Appendix) and Taraxacum (fluid extract of, see Appendix) are perhaps the best. The indication of amendment is the restoration of the natural appearance of the stools.

**BOILS** are small tumours upon the surface of the body, accompanied by heat, redness, and considerable pain; the latter symptom varying in degree, according to the size and site of the boil. After a day or two the redness and hardness subside, and suppuration takes place.

Some persons are more subject to boils than others. This affection is very common in warm climates,—attacking Europeans in India, for example,—and in the case of many, serving to carry off from the system some noxious element which had previously existed; hence it is not uncommon to regard boils as a healthful complaint. But though healthful, the occurrence of boils may be very painful. Not unfrequently the appearance of boils assumes an epidemic character, many persons, residing in the same locality, becoming at the same time affected.

Attention to diet and cleanliness is very important in the treatment of this affection. All articles of food likely to disagree should be avoided. The application of warm poultices or fomentations to the boils themselves is often rendered desirable; these should not, however, be longer continued than necessary, as they are apt to produce irritation of the surrounding skin. Sometimes the purulent matter must be relieved by the lancet. Small doses of cooling medicine—acid-tartrate of potash (cream of tartar), with sulphur, or acetate of potash in solution—are useful remedies (see Appendix): these should be administered while the boils are forming, and during their decline.

**BRONCHITIS** is the term employed to designate the occurrence of inflammation in the mucous membrane of the bronchial tubes. It is customary to speak of an *acute* and a *chronic* form of bronchitis; the former, as its name denotes, running its course in a briefer space of time, and being invariably accompanied by more or less marked febrile or acute symptoms; the latter being apt to continue for a much longer period, and usually unattended by fever. A short description of each will here be offered.

In one or other form, bronchitis is among the most common

and prevalent of all inflammatory affections. The majority of mankind, certainly in such a climate as ours, do not pass a single year without suffering an attack more or less severe; while in winter and spring, when cold—the most powerful of the exciting causes of bronchial inflammation—is peculiarly in operation, the number of persons so affected is greatly increased, and it oftentimes prevails in an epidemic form.

Like all the inflammatory affections of the mucous membrane of the air-passages, the disease is very easily excited in most persons; while there are certain individuals who manifest an unusual, some an extreme susceptibility, to become affected by it. The periods of life most obnoxious to bronchitis are childhood, adolescence, and old age; and though it does occur at all ages, the constitutional vigour of adult life appears, from time to time, to act in enabling the individual to resist the invasion of the disease. No disease varies more in its degrees of severity than bronchitis: it may assume a very simple and easily manageable form; and, on the other hand, it may appear as a very formidable ailment, and showing little amenability to treatment; in early and very advanced life it is most apt to assume this severe character.

Allusion has been made to cold as the very frequent cause of attacks of bronchial inflammation, more especially is this true of cold combined with damp. The sudden transition from heat to cold, as we so frequently observe in the instances of persons leaving crowded places of public resort—the ball-room or concert, the theatre, lecture-room, or church; and, finally, what cannot be too carefully guarded against, the sudden change from the warm garments of a winter season to the cooler vestments of summer;—these may be regarded as the common causes of acute bronchitis when it occurs in the adult.

Inflammation of the mucous membrane of the bronchial tubes not uncommonly follows the occurrence of a nasal catarrh, or, as it is called, cold in the head (see *Catarrh*, p. 21); but frequently the symptoms originate in the chest. These



are, in the first place, a feeling of uneasiness, seldom amounting to actual pain, experienced towards the root of the trachea or windpipe, immediately behind the summit of the sternum or breast-bone. This sensation, shortly after its first manifestation, passes down through the whole extent of the breast-bone, giving rise to what is well described as a feeling of rawness. It may be experienced also in other parts of the chest. Then follows a sense of constriction, but there is no decided catch or stitch felt on breathing, even to the fullest possible extent; it is a sense of oppression which exists, leading to frequent yawning, and causing much discomfort. These sensations have not been present for more than a short time when cough occurs, and by it the feeling of irritation is very considerably augmented. At first the cough is dry; that is, unattended by expectoration. The patient feels as if some foreign substance existed in the chest, and violent but ineffectual efforts are made to cough it up. After a time, varying from twelve to twenty-four hours, there occurs the expectoration of a small quantity of thin fluid, frothy, and possessing a saline taste; and shortly afterwards small irregular masses, what the French call *nacrés*, resembling pearls, are coughed up. In other four-and-twenty or six-and-thirty hours the cough becomes easier; formerly irrepressible, the patient can now, to a certain extent, prevent its occurrence, keep it down; nor, when it does occur, is the great uneasiness and feeling of laceration or tearing in the chest any longer produced. With each cough there is expectorated with ease, and with a grateful sense of relief, sputum, which is opaque, yellowish in colour, consisting of mucus no longer frothy. Such is a brief description of the succession of the local symptoms in cases of ACUTE BRONCHITIS when it assumes a mild form. There may be in persons so affected an entire absence of febrile excitement; want of due care, however, fresh exposure to cold, indulgence in stimulating food or drink, will readily determine it, and such must be carefully avoided.

When unaccompanied by fever, confinement for a day or two to the house, and the employment of the simple means

which will shortly be detailed, usually suffice for complete restoration to health.

But though frequently mild, bronchitis, in an acute form, is prone to be a very serious disease. When it attacks, as it is apt to do, persons weakened by previous illness—the convalescent from fever, for example, or individuals of impaired constitution—the disturbance of the general system is always much greater, and life may be brought into peril. In severe cases, the mucous membrane of the larger bronchial tubes is not alone affected, but the inflammation extends to the membrane lining the minute, or, as they are termed, capillary tubes. This variety of bronchitis is peculiarly apt to occur in young subjects, and it is one of the dangers to which the child suffering from hooping-cough is exposed (see *Hooping-cough*, p. 139). In such cases, the great danger consists in the accumulation of mucus in the air-tubes, preventing the proper access of air to the lungs, and interrupting those changes which are necessary in the blood brought to these organs. Hence a livid colour of the lips, sometimes extending over the whole countenance, and visible in the extremities, especially the fingers and toes, is a marked symptom, and one of very serious import in such cases. A peculiar rattling noise is audible, more particularly when the ear is approximated to the chest, in all cases of bronchial inflammation. At a certain stage this rattle, after a cough which has been attended by expectoration of phlegm, generally subsides for a short time, to return as the secretion in the tubes collects.

One of the chief reasons why bronchitis is so fatal as a disease of early life, is the great difficulty attending expectoration in the child : it is, in the great majority of instances, almost impossible to secure this most desirable result otherwise than by the employment of emetic remedies, which, though perfectly safe at a comparatively early part of the case, and when administered to a strong child, must only be exhibited with the greatest degree of caution in the more advanced periods, and are almost inadmissible as remedies when the subjects of the disease are much enfeebled or depressed.



The amount of febrile disturbance, which at times is excessive, must be regarded as another of the dangers of acute bronchitis; and it is important to bear in mind that the febrile symptoms may precede the manifestation of any local indications, though they are more likely to be developed as the latter are appearing. The degree of febrile excitement always plays an important part as respects the individual cases of the disease: it must regulate the treatment, and always very considerably affects the opinion as to the issue of the case which the physician is led to entertain. As regards treatment, it will readily be understood that a considerable variety exists, according to the age and constitution of the patient, and the degree of severity of the disease; also, according to the particular period or stage of the complaint. In those cases which are attended by febrile excitement, confinement to the house, and better still, to bed, is to be recommended; while, as in the treatment of all inflammatory and febrile ailments, the diet should be low.

At the outset it is to be regarded as a safe and proper course to administer a dose of laxative medicine (castor oil, or senna, or compound jalap powder, see Appendix). In severe cases occurring in adults, when the uneasiness in the chest is very considerable, and the cough violent, blood to a small amount (two or three ounces) may be taken locally, by the cupping instrument or by leeches: this, however, is not likely to be required; while it is to be borne in mind that moderate local blood-letting is most likely to prove useful in the very earliest stage of the disease. Early recourse should be had to one or other of those remedies which are known under the name of expectorants: of these, antimony and ipecacuanha are the chief; the former, however, may be regarded as the remedy *par excellence* in the treatment of bronchial inflammation. It is best prescribed either in the form of the antimonial solution (tartar emetic dissolved in boiling water), or antimonial wine (for doses and mode of administration, see Appendix). These remedies act on the mucous membrane, and determine the secretion, which, passing off as expectoration, enables the surface to recover its

normal condition. They further act as febrifuges, reducing the frequency and force of the pulse. This effect is often produced at the same time as a feeling of nausea; or even an emetic action is caused. They also act upon the skin, causing a moisture or free perspiration; hence they are called diaphoretics. The proper period to continue such remedies is till free and easy expectoration is produced; then the doses may be omitted altogether, or administered less frequently. Counter-irritation by mustard poultices applied over the chest will be found useful from the very earliest period; and when the febrile symptoms have greatly subsided, if the cough and difficulty of expectoration still remain, the employment of a fly blister may do good. In those cases which have been described as occurring in very old persons or of debilitated constitution, and in whom there exists, from an early period, much depression, antimony is not a safe, nor is it likely to be an efficacious remedy. Expectorants of a more stimulating nature are in such circumstances required (carbonate of ammonia, senega, see Appendix). And in all cases where there exists any evidence of a tendency to failure of the vital powers, that is, of the system generally, stimulants, wine and brandy, must be administered. (For rules regarding this important subject, see Appendix.) The treatment of bronchitis occurring in the child will be introduced under the head of *Whooping-cough* (p. 139).

CHRONIC BRONCHITIS may occur as the result of the acute affection, or it may be originally developed in its own particular form. This ailment is essentially one of advanced life; children seldom suffer from it, and rarely also are adults affected by it, unless found in combination with some alteration in the structure of the lungs themselves (which need not be insisted on here), or as symptomatic of some other affection, more especially of the heart.

Of all the symptoms of chronic bronchitis, the most characteristic and unvarying is cough; not like the dry, difficult cough of the earlier stage of the acute affection, but habitually full and easy; though, as not uncommonly happens, if any acute exacerbation in the course of the disease

occur, it is liable to become, and that speedily, both difficult and painful. As a general rule, the cough is more frequent in the morning upon awakening from sleep, and in the evening, than during the course of the day. The expectoration is usually abundant, composed of opaque masses of a dirty white, grayish, or greenish colour. Occasionally the odour of the expectoration is very offensive.

In the treatment of this disease, much depends on the general state and habit of body of the person affected. The following advice, may, however, be considered as of pretty extended application. Diet should be light; gentle exercise should be pursued, great care being taken in the avoidance of cold and damp. The patient should wear flannel, and regularly sponge the chest and shoulders, in winter with tepid, in summer with cold water. Bowels should be carefully regulated. In the Appendix will be found, *inter alia*, a list of expectorant and soothing remedies which have been found useful in the treatment of chronic bronchitis. Occasionally much distress arises from the excessive secretion of the mucous membrane; and in order to arrest this, a source, at times, of great weakness to the patient, astringent remedies are employed. Under the head of *Acetate of Lead*, *Gallie Acid*, &c., in the Appendix, remarks on this subject will be found. When, in the course of chronic bronchitis, an attack of the acute disease supervenes, the remedies which have been indicated as suitable in the ordinary febrile disease should be employed, but with even greater caution, seeing that the constitution of such sufferers is probably considerably impaired, owing to the existence of the chronic affection, and that, in consequence, they are less able to bear those medicines which exert a depressing action on the system.

**BROW AGUE** (*Hemi Crania*), called by the French *Migraine*, and popularly known in this country as "Megrim." A headache affecting the brow, or sometimes extending over one side of the head alone, leaving the other unaffected. In a great many instances this form of headache is periodical in

character, attacking the person at a certain hour on successive days, continuing during a defined period, and again as regularly subsiding; not uncommonly, however, it continues in an unmitigated degree for many hours, or even days. It is not uncommonly connected with disorder of the system generally. Failure of appetite, sickness, and mental depression very frequently accompany it.

When distinctly periodic in its nature, this painful disorder yields readily to quinine. After the bowels have been freely acted upon by laxative medicine, this remedy may, in such circumstances, be administered in two to five grain doses, at intervals of two or three hours, until the pain yields. When not distinctly periodical in its occurrence, and when evidently associated with general weakness, one or other of the preparations of iron may be employed with benefit. (See Appendix.)

**BRUISE**, a contusion or hurt upon the flesh. See, under Part II., *Accidents*, p. 227.

**BURNS** and **SCALDS**. See, under Part II., *Accidents*, p. 228.

**CATARRH**, a term derived from the Greek words *kata*, *reo*, signifying to flow down. It has been applied to indicate the different varieties of acute and chronic inflammation seated in the mucous membranes of the body, and attended by increase of their natural secretions. In ordinary language, however, catarrh is restricted to the defluxion of mucus from the nostrils, throat, and bronchial tubes; it may, indeed, be regarded as synonymous with the expression, a cold in the head and chest. When occurring, as it not unfrequently does, in an epidemic form, the affection is styled *Influenza* (see p. 152).

The symptoms of catarrh are usually general uneasiness, and, if severe, some degree of febrile excitement, preceded by chills, sneezing, frontal headache, watering of the eyes and nose (these constitute the cold in the head, or coryza), followed by slight sore throat, cough, with expectoration,



after some hours, of scanty mucus, and, perhaps, more or less pain behind the upper part of the breast-bone, and sense of constriction in the chest.

The strong and the weak are alike prone to suffer from this affection. In the case of the latter, it is specially important to prevent the passage of the inflammation from the head, where it usually commences, to the chest. In many instances this can be effected by care, confinement to the house or to bed, starvation, or at least the use of the simplest articles of food in very small amount. If feverishness occur, such a remedy as the mindererus spirit in dessert-spoonfuls should be administered every three or four hours till a free perspiration is induced. For the relief of the cough, and in order to aid expectoration, a few drops of antimonial wine (15 or 20) may be added to each dose. A dose of laxative medicine is often required. If administered in the very earliest stage, opium frequently serves to check the advance of a catarrh. For this purpose, a single grain or two grains of crude opium in pill, or twenty-five drops of laudanum or morphia alone, or combined with an equal quantity of antimonial wine, may be given to an adult, after the feet have been bathed in hot water. Dr. Ferrier has lately suggested a plan of treatment by the local application of bismuth powder to the nasal mucous membrane. He recommends that a mixture of two grains of hydrochlorate of morphia, two drachms of powdered acacia, and six drachms of sub-nitrate of bismuth, should be used as a snuff, and drawn up into the nostrils after each clearing of the nose. A person suffering from coryza and catarrh, and placed in circumstances which prevent him "laying up," will often be benefited by taking a small quantity of a medicinal stimulant; a tea-spoonful of sal-volatile (aromatic spirit of ammonia) in half a wine-glassful of water may be employed for this purpose, and repeated, in the course of two or three hours, if benefit is received.

An ordinary catarrh usually declines in the course of a few days. The great risk is, that the inflammatory affection may extend to the bronchial mucous membrane, and so give



rise to *Bronchitis* (see p. 14); therefore, in all cases, but specially in the instance of delicate persons and such as are subject to chest affections, there is room for much care and caution.

**CHICKEN-POX** (*Varicella*). Under this name, or that of Water-Pox, is known the mild contagious eruptive disease which, bearing a close resemblance to Small-Pox, differs from it in the transparent vesicles of which the eruption is composed (instead of the pustules which characterize the latter), and in the entire absence of any secondary fever. Chicken-pox leaves no deformity. It is essentially a disease of childhood. In some of the severer cases, constitutional disturbance of a marked degree precedes the development of the eruption, but this is rare.

Confinement to bed, in very mild cases to the house or a single room, care in respect to diet, and the employment of a mild laxative once or twice during the progress of the complaint, is all that is required. As the affection is contagious, the sick should be isolated if possible.

**CHILD-CROWING.** The disease of childhood to which this name has been applied, is also variously known as False, or Bastard, or Spurious Croup, to distinguish it from the still more formidable inflammatory affection to be afterwards described; and, for the like reason, Spasmodic Croup, —a by no means good name, inasmuch as, in every case of true croup, there occurs some amount of spasm. The appellation *Laryngismus Stridulus* has, moreover, been employed since the time of a distinguished English nosologist, Dr. Mason Good; while the disease has been carefully investigated and well described by German writers, as the *Thymic Asthma*. The simple expression Child-crowing was first used by Dr. Gooch, an English physician, and able writer on diseases of children and of women, and is peculiarly suitable, inasmuch as it indicates the nature of the chief symptom which attends the affection. Though the disease had been correctly described at a much earlier period (as,

for example, by Felix Plater, in 1641; and by Dr. John Millar, in 1769), it is to the late Dr. John Clarke that much credit is to be ascribed, for strongly directing the attention of the profession to it. This physician, like many others of his time, regarded the affection as dependent upon cerebral disease or derangement within the head; and thus he was led to describe it as a peculiar species of convulsions (see his *Commentaries on some of the most important diseases of children*, 1815). Dr. Clarke was the first observer to notice the occurrence, along with the difficult and noisy respiration, of a peculiar tonic contraction (that is, steady and continuous spasmodic contraction) affecting the fingers, thumbs, wrists, feet, and ankles, now well known under the name of the carpo-pedal contractions. Dr. Ley, another English physician, was the earliest to throw doubt upon that explanation of the disease which supposed its dependence on cerebral affection, and to suggest the view now generally entertained by the profession, that either a large thymus gland, or certain enlarged glands in their vicinity, exercise an injurious pressure on important nervous structures in the neck (the pneumo-gastric or recurrent laryngial nerves), and thus lead to the spasmodic difficulty of breathing. (Ley on *Laryngismus Stridulus*.)

The main symptom of this disease, then, is a remarkable sound accompanying the inspiration. This crowing breathing is always established suddenly—very frequently it is developed as the child awakes from his first sleep. At all events, just like true croup, this affection is apt to commence by night. With the difficult breathing there is seldom much cough; in many instances there is no cough present at all. Another class of symptoms exists, which is regarded as accessory, but whose presence is not essentially necessary; for the disease may, and every now and then does, occur either altogether without them, or with their presence only feebly marked. The symptoms now referred to are clearly nervous in their origin, and they accordingly indicate the participation to a greater or less extent of that important system. Of this nature are the convulsions which accom-

pany the difficult breathing. During these the hands are almost invariably closed; the thumbs strongly bent; the head is drawn sideways or backwards; the muscles of the back are powerfully contracted; a certain degree of lividity of the face exists, followed at no long period of time by pallor, often ghastly in appearance; dilatation of the nostrils; the eyes firmly fixed; coldness of the extremities; and involuntary passage of the stools and urine. Kopp, a German, and Brera, an Italian physician, have further mentioned as among the symptoms of greatest importance, pains with spasms through the chest, great feebleness of the heart's action and sound, and particularly the protrusion of the tongue, which, they state, children so affected hold between their teeth, or, if dentition has not occurred, between the upper and lower gums. During the continuance of the seizure, the pulse is rapid and small; when the paroxysm has subsided, the normal character of the pulse is regained.

In extreme cases, death is not unapt to occur; and when it does happen, it is by suffocation,—the spasmodic contraction at the entrance to the windpipe acting so violently as to obstruct the passage of air to the lungs. When death does not result in this manner, the strength of the little patient may gradually become more and more exhausted, until, altogether enfeebled, pale and cold, he falls back lifeless on his mother's or a nurse's lap. The more usual course, fortunately, is for the paroxysm, after continuing a short time, to yield, and the child again breathes with freedom, until another spasm occurs. The number and severity of these vary considerably. Sometimes, and more especially if remedial means are promptly applied, there is no recurrence of the paroxysm.

The great majority of patients affected with this disease are very young children. M. Guersant of Paris, who has had a very extended experience in the diseases of childhood, remarks that he has only seen pseudo-croup to occur twice in subjects who had passed the age of seven years. Though most common at a very early period of life, the disease does, however, occur not unfrequently after the age of seven, and



has been known to attack adults, and even persons advanced in life. Another physician, in a paper on Croup, published some years ago, records a case in a woman of fifty-five, in whom the symptoms of the spasmodic affection manifested themselves at the same time as in a little girl of eight years.

Sex seems to exert a certain amount of influence in the production of this disease, and, as holds good in the true or inflammatory croup, the male is the one which shows the greater proclivity to it. Of 511 cases mentioned by Guer-sant, 293 were males, 218 females. Of 60 cases treated by Jurine and Jancecovich\* (quoted by Rilliet and Barthez, *Maladies des Enfants*), 43 were boys, 17 girls.

While no decided proof of the hereditary transmission of the disease exists, there can be no question that a constitutional tendency to the complaint can be traced in whole families. Mr. Pretty illustrates this by referring to his own family, three of whom were attacked in succession. Mr. North mentions a similar circumstance. The author was once suddenly summoned, at night, to visit two young children, brother and sister, seized in the same instant of time. Dr. Henry Davies says: "I have now a patient whose mother has lost three children by it." The experience of Dr. Ley is confirmatory of this.

An interesting observation, bearing on the etiology (that is, the inquiry as to the causes) of both the false and the true croup, has been made by M. Guersant—namely, that the former attacks principally the children of the better classes of society, of those who are in easy circumstances; while the inflammatory affection is chiefly found among the children of poor parents, imperfectly fed and clothed. All the cases of false croup which the author has charced to witness, occurred among children of the better ranks; of the few cases of inflammatory croup which he has been called upon to treat, all were either in dispensary or in hospital practice.

\* It is to be remembered that there are actually, living, more boys than girls, but the proportion in the statistics now referred to is much greater than can be accounted for in this way.

The occurrence of the disease is, to a considerable extent, under the influence of climate and season. In dry and warm climates it is little known, hence it is not familiar to many German and French writers. Damp situations and seasons predispose to, as well as act directly in exciting the disease; it is also aggravated by the vicissitudes of temperature—a reason for its being well known in this country. Dr. Ley mentions, that in the winter of 1833–34, when there was little frost and much damp, the disease was very prevalent in London. Let it be borne in mind, that indiscretions in the matter of diet very clearly predispose to it. Children of the scrofulous constitution (for description of what is thus meant, see *Scrofula*, p. 196), and especially such as suffer from enlargement of the cervical glands, are subject to this disease. Among those causes which seem to act most powerfully in directly exciting the affection, are the irritation in the gums during teething, the presence of worms in the bowels, or of indigestible articles of food in the stomach, and also eruptions on the scalp, and exposure to cold and damp. Paroxysms of the disease are apt to be excited by violent muscular movements, by crying, cough, sudden awakening from sleep, or sudden application of cold.

Allusion has already been made to the explanation of the chief phenomenon of the disease offered by Dr. Ley. “Scarcely an instance,” remarks this writer, “since my attention has been much directed to the subject, has occurred, in which there has not been the strongest foundation for the belief, that either some of the chain of glands in the neck, or the absorbent glands within the chest, had become morbidly enlarged.” Here it need only be observed, that the various important discoveries in regard to the nervous system which have been made since the work of Dr. Ley was published (those, for example, of Dr. John Reid, and very especially of Dr. Marshall Hall) have tended in great measure to confirm the correctness of the view he enunciated. It is through reflected nervous action that painful dentition, or the irritation produced by intestinal worms or by a scalp



eruption, tends to excite the spasmodic difficulty of breathing, as well as the contractions in the hands and feet.

It is of great importance to be able to distinguish between the disease which has now been described, and the inflammatory affection, an account of which will be found under the head of *Croup*, p. 81. The suddenness of the attack, the child having very probably gone to bed in perfect health; the absence of febrile symptoms; the complete freedom of breathing during the intervals of the paroxysms; the knowledge that dentition is in progress, and has, moreover, been difficult, or that worms exist in the intestinal canal, or that a scalp eruption is present; finally, and very important, that the child has previously suffered from the disease, for it is prone to return,—serve to distinguish the former.

The prognosis or opinion as to the result in such cases which may be entertained is undoubtedly favourable,—more so than what is formed in the inflammatory disease. The great majority of those affected by false croup recover; but while this is true, the disease is not one to trifle with. “It is,” says Sir Thomas Watson, “really a perilous as well as terrifying condition. The respiration is sometimes so long suspended, that death takes place in the paroxysm; and each paroxysm is accompanied by a tendency to stagnation and congestion of blood in the brain, lungs, and heart,—a tendency which, by its frequent repetition, may lay the foundation of serious and fatal disease in one or other of those vital organs.”—(*Lectures on the Principles and Practice of Physic*, vol. i.)

What is the proper treatment to be pursued in this affection? First, what is the plan to adopt when the child is suddenly seized? Let him be placed as quickly as possible in a warm bath (see article *Warm Bath*, in Appendix). While this is being prepared, let a sponge, previously dipped in hot water, be applied over the throat; and as the sponge cools, let the reapplication be continued. A sudden clap on the back, or the dashing of a little cold water over the face and body, may suffice to undo the spasm, and these simple means should not be neglected. If the attack seem to have

resulted from an error in diet,—if, as is not unfrequently the case in children older than mere infants, a surfeit has been taken,—let an emetic be administered ; this can be done while the patient remains in the bath. For this purpose, the safest and best remedy is the wine of ipecacuanha, a bottle of which should always be at hand in every house where there is a sufferer from false croup. If these means are insufficient to reduce the spasm, there are still others in the hands of the physician, but he must be present to execute them. Life, in such circumstances, has been preserved by the performance of the operation of tracheotomy, or opening of the windpipe.

But something more is required than attention to the paroxysm itself. The tendency to it may continue. It then becomes a matter of importance to determine whether any cause, distant it may be (that is, in a remote part of the body), exists : if dentition is painful and difficult, the gums must be lanced (see Part I., p. 210) ; if worms are present, some suitable vermifuge remedy must be administered ; and if there be an irritating scalp eruption, those appliances must be used which tend to soothe or entirely remove it. (See Eruptions on the Scalp, p. 212.) If the child suffer from enlargement of the cervical glands, or present other manifestations of the scrofulous constitution, the general health must, if possible, be improved, by such means as a nourishing diet, and remedies such as cod-liver oil, or phosphate of lime, in doses of five to ten grains, administered in chalk mixture thrice daily, as suggested by Dr. William Budd ; the syrup of the iodide of iron, &c. Lastly, and very important in the treatment of this disease, change of air, specially from an impure or damp to fresh and more bracing air, is oftentimes a potent remedy ; it may always be regarded as a powerful adjuvant in every tedious case. Nor need the removal be to a great distance. The author has known the slight change involved in leaving a residence in the northern part of Edinburgh and going to Morningside, sufficient to check the disease when all other means tried had failed.

**CHOKING.** See Part II., p. 229.

**CHOLERA.** This term is a compound of two Greek words, *chole*, bile, and *rein*, to flow ; its literal signification, therefore, is a discharge of bile. As is very well known, however, cholera has been applied to designate that formidable disease which, originating in the East, has, on various occasions, invaded this as well as almost every other country, carrying off large numbers of persons after a very short illness. In this disease the secretion of bile, as well as of other important products, is suspended ; and instead of the stools containing a large quantity of bile, they are entirely free from it. It is customary, therefore, to distinguish between two forms of disease by calling the one English (British) or sporadic (that is, occurring in scattered cases) Cholera ; the other, Asiatic or epidemic (that is, affecting a number of persons at the same time) Cholera. These will now be shortly noticed in succession.

**ENGLISH CHOLERA** (Bilious Diarrhœa). This complaint is characterized by the sudden occurrence of severe vomiting and purging. The matters vomited and passed at stool contain usually, in the first instance, substances in a partially digested condition which have been taken as food. After a time, by vomiting and purging, a large quantity of liquid is discharged, possessing the characteristic appearance of bile : the colour, indeed, varies ; it is at times quite green, at others brown or almost black,—these, however, are the shades presented by vitiated bile, or bile which has been acted upon by the unhealthy secretions during its passage through the alimentary canal. With the vomiting and purging are associated severe pain in the stomach and bowels ; the patient often calls out from the violence of the suffering. Should the attack be a smart one, cramps in the muscles of the limbs and in those of the belly come on, and the patient's strength becomes much exhausted. Coldness of the extremities, with a cool perspiration over the surface of the body, supervene, and fainting is not unapt to occur. Happily, this form of cholera is not a fatal disease in this

country ; nevertheless there are, undoubtedly, not a few instances of death occurring from it. When it attacks the old and enfeebled, it is most to be apprehended.

Attacks of English cholera are infinitely more common during summer than at any other season. Heat exercises a remarkable influence over the function of both liver and bowels. Every one knows how common in tropical countries are affections of these organs. We see evidence of the same in the frequency of attacks of biliary derangement, and specially bilious diarrhœa, during summer, and more particularly if the season be unusually warm. Dr. Farr, the English Registrar, has remarked that "diarrhœa is as constantly observed in English towns, when the temperature rises above sixty degrees, as bronchitis and catarrh, when the temperature falls below thirty-two degrees." Besides the influence of an exalted temperature, or the accidental exposure to cold after the continuance of the former for a time, in determining attacks of English cholera, it will very generally be found that some error in diet has been committed ; the drinking of acid wines, ciders, or other beverages, or partaking of sour or unripe fruit, in numberless instances may be ranked as the exciting causes of the malady.

As to the treatment of English cholera, most physicians are agreed that the diluent plan pursued by Sydenham is, in the great majority of cases, the safest and most proper. The employment of purgatives, on the one hand, or of astringent remedies, on the other, is generally regarded as inadmissible. In the very earliest stage of the disease, and more especially if it has distinctly followed some error in diet, the former plan may be adopted ; but the probability is, that the remedy employed, whatever it is, will be speedily rejected. The reader will readily understand the argument of the illustrious English physician of the seventeenth century. Treating of the cholera morbus of the year 1669, Sydenham observes : "By careful reflection, by observation, and by the results of a manifold experience, I have thoroughly convinced myself that to expel the acrid humours, the focus of the malady, by cathartics (purges), is just to



add fuel to the flame. The mildest operation of the mildest purge disturbs the whole system, and induces fresh commotions. On the other hand, by checking the impetus of the disease at its onset, I should wear out the patient by an intestine war ; since I should confine the enemy to his seat in the bowels, should impede the natural evacuations, and detain those humours which were seeking for an outlet. For these reasons I keep a middle course. In part I evacuate the humours ; in part I dilute them. By these means I reduce the disease to a manageable form. I have done so as often as it has occurred ; and the plan of treatment has been tried by me for many years, and, as such, approved."

If, during a summer season, specially an unusually hot one, and while others are suffering from the malady, a person be suddenly seized with bilious vomiting and purging, accompanied by severe pain in the stomach and bowels, cramps in the limbs, and succeeded by a sense of faintness and exhaustion, let diluent drinks be administered,—warm water, barley water, or weak chicken broth (the last was strongly recommended by Sydenham). These may be taken by the mouth, or used as injections ; and it is surprising how much relief their administration affords. "This method of diluting the humours," says Sydenham, "is much safer and shorter than the common practice of evacuants and astringents. These are fraught with danger. They make the intestine turmoil both sharper and fiercer. They turn things upside down. They keep the enemy to his quarters ; and they change him from a visitor to a denizen. Besides this, the disease is prolonged, and there is danger in the delay." Ice, in such circumstances, is often a grateful remedy ; it tends to repress the most uncomfortable feeling of nausea, and has all the good effect of a diluent.

If, notwithstanding this plan, the symptoms continue, and there be any marked evidence of prostration of strength, which is always to be apprehended, then opium, either solid, in the form of pill, or laudanum, or an opiate injection, or suppository, is to be employed (see *Opium*, in Appendix, for information regarding doses, &c.). Opium is indeed the

“sheet-anchor” in this, as in many other diseases. Crude opium, as pill, should be given in preference to laudanum, when the irritability of the stomach is excessive ; it is more likely to be retained. The administration of the opium is to be continued as long as the complaint seems unarrested. When the powers of life are waxing faint,—when the pulse begins to grow feeble, still more if it flickers,—when the surface of the body becomes cool or cold,—if hiccough, at such a time a most unfavourable symptom, occurs,—then are stimulants to be given ; and of these the best is brandy,—warm brandy and water. Suit the precise strength of the mixture to the patient’s taste, but let it be strong. When thus seriously affected, the patient must not only be confined to bed, but permitted to make as little movement as possible ; the head kept low, so as to obviate the tendency to fainting.

A good application at an early period of such cases is a sinapism over the stomach and bowels, or hot salt in a flannel bag, or a hot fomentation of flannel with a little spirit of turpentine sprinkled over it. Friction with the hand, or any stimulating liniment, will tend to relieve the cramps of the limbs ; and, if they are very severe, the application of a tourniquet or tight bandage round the limb and above the seat of cramp, may serve to arrest them altogether.

From severe attacks of English cholera recovery is often very slow. Let this be kept in remembrance ; and, above all, let no article of food but what is safe, easily digested, as well as nutritious, be administered, till convalescence is far advanced.

ASIATIC CHOLERA. Attacks of this disease not unfrequently commence in the same manner as those of the sporadic complaint just considered. Very shortly, however, the matters vomited and those passed at stool present a very different appearance, and one which is altogether peculiar. Very watery, they are pale in colour, and from this circumstance have been called rice-water evacuations ; indeed, both the vomited matters and the alvine dejections are precisely similar to water in which rice has been steeped, with albuminous flakes mingling through it. It may be observed

here, that in some more than usually severe cases of English cholera, the same character of the stools is presented, while another of the ordinary symptoms of Asiatic cholera is also occasionally present—namely, suppression of urine. Severe cramps, moreover, torment the patient. To this stage succeeds that of extreme depression or collapse—the algide (cold) or blue stage, as it is often called; the surface of the body becomes cold, the breath itself cool, the pulse imperceptible, a peculiar dark circle surrounds the eyes, the voice is husky and low (*vox cholERICA*), the intellect alone remains entire,—not always so, however. In this state the sufferer often dies. But recovery from this condition of collapse may occur, and the patient be carried off in the stage of febrile reaction, which, in many cases (certainly not in all), supervenes. When restoration of the urinary secretion, and the reappearance of bile in the stools have been noticed, not till then can any patient in cholera be considered out of danger.

Europe has now witnessed four epidemics of Asiatic cholera: the first, in 1832–33; the second, in 1848–49; the third, in 1853–54; and the last in 1865–66; and the careful observation of the disease made by physicians, both in our own country and abroad, has very greatly increased our knowledge regarding it. Incontestably it has been established that neglect of personal and domestic cleanliness, and habits of intemperance, create a tendency to cholera. Those parts of large cities where filth and wretchedness abound, have always been found to be chiefly affected; and nothing has tended more to repress the disease, even when it has occurred, than a strict regard to the cleaning of such habitations.

During the prevalence of Asiatic cholera, very great care should be taken to notice, and if possible arrest, the earliest deviation from the natural condition of the bowels. A neglected diarrhœa is, in such circumstances, too apt to take on the characters of the epidemic complaint. In this disease, very specially may prevention be stated to be better than cure; comparatively little, indeed, can be done in those

extremely sudden and appalling cases (hence the disease is well named malignant cholera), which have hitherto been, and probably will be found, about the commencement of every epidemic.

No specific plan of treatment, universal in its application, can be recommended. An attentive and experienced nurse is of infinite use in the management of every case; much can be done by such a person. The friction of the limbs when seized by cramps; the administration of diluents, which will be eagerly asked for by the patient, and may be (specially rough ice) freely given; the application of sinapisms; and the exhibition of opiates and stimulants, not in large amount, that is sure to do harm, but cautiously, and in small quantity, can, under the direction of the physician, be mainly confided to the nurse.

**CHOREA**, or St. Vitus's Dance. This peculiar affection belongs to the class of nervous disorders. It is characterized by continued, irregular, and involuntary muscular movements, affecting, chiefly, the upper and lower limbs, and the face. Very frequently one side of the body is either alone affected, or much more so than the other. An attempt to walk, or to grasp any object with the hands, usually causes the choreic spasm to become more marked. In mild cases the movements entirely cease during sleep; but in the more severe, they either prevent repose, or continue in a modified form during it.

The term Chorea is derived from the Greek word *choreia*, signifying a dance; while the malady is known under the designation of Saint Vitus's Dance, from the circumstance that, in the neighbourhood of Ulm in Suabia, there is a chapel dedicated to Saint Guy, to which, towards the close of the fifteenth century, persons were in the habit of resorting in order to implore the interposition of the saint against the disease.\*

A patient affected with well-marked chorea presents a

\* The German name for the saint is St. Veit; and for the disease, Veits-tanz.



most singular appearance, inasmuch as all the voluntary muscles are liable to be affected by it; and thus, while the arms and legs are being moved about, the face is twisted and turned, so as to cause the most grotesque contortions. Parents and guardians of youth will do well to hold in remembrance that the disease is very apt to show itself in a form extremely modified, when the involuntary movement of the facial muscles may readily enough, but very erroneously, be ascribed to mirth or mockery, and for pulling a face the patient be summarily chastised;—a proceeding more calculated to increase than to remove the disorder. Patients suffering from chorea are always more than usually sensitive; very apt to be easily alarmed; in mind, as in body, never constant, but changing rapidly from one notion to another.

Though by no means unknown in the adult, chorea is essentially a disease of childhood, and attacks girls more frequently than boys. M. Rufz, an able French writer, analyzes 189 cases; of these, 138 were girls, only 51 boys.

Uncomplicated chorea is very rarely a fatal disease, but it is found intimately connected with rheumatism, and with affection of the heart; therefore, in its mildest form, it is not one to neglect or trifle with. Recent observations of British physicians, more particularly of Dr. Begbie, Dr. Todd, Dr. Hughes, and among continental writers, of Dr. See of Paris, have established the frequent relation of rheumatism and chorea; and as the former of these is liable to be found associated with disease of the heart, so also is the latter.

Chorea is not unfrequently found as the result of a fright; and care should always be taken to determine whether or not, in connection with the nervous disorder, there be irritation in the gums, stomach, or bowels. About the period of the second dentition (see *Teething*, p. 208), when the first teeth still present are being supplanted by the second, and when, as a natural consequence, there is much irritation in the mouth, chorea is common. Still more so is it when worms exist in the bowels, and when the stomach is habitually overloaded with improper food, and the bowels much confined. Again,

in young females, before their health is thoroughly established, the disease is frequently seen ; and it sometimes occurs during pregnancy. These points should always be held in remembrance, before any particular plan of treatment is adopted.

As a general rule, the bowels should, at the commencement, be cleared by one or two doses of laxative medicine. For this purpose, a little calomel, with jalap or scammony, may be used. After this, in uncomplicated cases, the tonic plan of treatment should be steadily persevered with ; gymnastic exercises, the cold shower-bath, sponging with salt water. In cases of delicate children, the water should, for a time at least, be used tepid. Speedy relief is often obtained by the daily application of ether spray over the spine, the application being continued for five minutes at a time. Of internal remedies, those which have been chiefly employed and are most highly esteemed, are the preparations of iron, zinc, and arsenic ; and perhaps of all, the weight of testimony seems most in favour of the last. Arsenic is best administered in the form of the *Liquor Arsenicalis*, or Fowler's arsenical solution, of which three to five drops may be given thrice daily after meals, until some of the peculiar specific effects of the remedy are produced. These are, in the language of Dr. Begbie, "itching and swelling of the eyelids, redness of the conjunctivæ (the white part of the eyes), nausea, and uneasiness at the pit of the stomach, and particularly a peculiar white silvery appearance of the tongue, seldom accompanied with tenderness." When these appearances are observed, the remedy should, for a short time at least, be suspended ; to be resumed, however, if the nervous affection continue. Thus carefully watched, the arsenical solution is a manageable and safe medicine, while there are few medical men who have not confidence in its remedial virtues, or who are now deterred from its use by the fanciful notions at one time entertained regarding its injurious effects. (A brief notice of the proper method of employing zinc and iron, as well as other remedies in chorea, will be found in the Appendix, under each head. When painful

dentition exists, the state of the teeth must be carefully attended to. Extraction of one or more of the first teeth, to make room for the second, will probably be required. When worms exist in the bowels, then such means are to be employed as will be found detailed under the head of *Worms* (p. 225). It is in many cases necessary to employ sedatives in order to diminish the movements. Those most to be recommended are cannabis Indica, the Indian hemp, the bromides of potassium and ammonium and chloral hydrate. The diet in cases of chorea should be light, all articles of food likely to disagree being strictly prohibited. The patient, moreover, should be carefully protected from any violent emotions, kept as tranquil as possible, and permitted to enjoy moderate exercise, when the weather is fine, in the open air.

**COLIC.** According to its etymology, this word should signify an affection of that part of the intestinal canal which is denominated the colon. Its application, however, is not so restricted; and colic may be defined as severe pain seated in the belly. 'As there are many diseases, however, and more particularly inflammatory affections, which are accompanied by pain in the belly, it comes to be a matter of importance to distinguish between these and colic.

The pain in colic is seated, for the most part, round or in the neighbourhood of the navel: it is of a sharp, twisting character; generally the bowels are at the same time confined, and vomiting may be present. But in simple colic there is no fever; the skin is not hot, nor the pulse frequent; and these negative signs distinguish it from inflammation in the bowels, along with which there is always febrile disturbance. Again: in colic the pain in the belly is not increased, but generally is rather relieved by pressure. Often the patient tosses about and turns on his belly, pressing strongly on the bed, and in that position alone finds some mitigation of his suffering. In inflammation precisely the contrary obtains; the slightest degree of pressure over the belly causes increase of suffering; and the patient usually lies with his



legs drawn up, and resolutely maintains the one posture. In colic, the pain, from time to time, occurs in a very severe form, often causing the sufferer to call out; while, during the continuance of the spasm, he shifts from one position to another. These exacerbations are caused by the lodgment of wind in one portion of the bowels, and its consequent distention thereby. Wind is generally felt and heard to be moving, and upwards or downwards it often finds vent; its discharge, same time, affording no inconsiderable relief. Let it be remembered that colic may occur as the prelude to an inflammatory attack; and that if neglected, or unskillfully treated, such tendency is very considerably increased.

In the treatment of colic, very great advantage results from the external application of warmth; hot fomentations, bags of hot salt, or turpentine stupes (see Appendix, *Turpentine*), or mustard poultices, should be diligently employed. While these means are being used, a dose of laxative medicine should be administered; for as in the great majority of cases of colic the pain depends on some obstruction in the bowels—very likely on the presence in them of some deleterious and indigestible matter—it is of essential importance that free passage should be obtained as speedily as possible. If obstinately confined, calomel, in from five to ten grain doses (according to the age of the patient), should be given; if a less degree of constipation exists, then a full dose of castor oil, or of compound rhubarb (Dr. Gregory's) powder, will probably suffice. Along with the laxative dose, in the first instance should be given an opiate—a grain or a half grain of opium, or an equivalent dose of the solution of morphia, acetate or muriate. (See *Morphia*, in Appendix.) When free action of the bowels is obtained, the pain soon ceases. After such attacks great caution is requisite in the matter of diet for some time.

Here a brief description may be added in regard to a very interesting form of colic known under the name of *Colica Pictonum*, or LEAD COLIC. The former appellation was applied to the affection on account of the frequency with which the Pictones, or inhabitants of Poictou, in France, suffered



from it; but a great variety of names are employed to distinguish it, chiefly according to the localities where it occurs: thus it is called the Spanish Colic, the Colic of Madrid, of Cayenne, of Surinam, Devonshire Colic, the Dry Bellyache of the West Indies, the Bellain of Derbyshire; other names are Saturnine, Metallic, and Painters' Colic.

This variety of colic is caused by the slow introduction of lead into the system; the deleterious effect is, however, differently accounted for in different places and under varying circumstances. Reverius, writing in the sixteenth century, notices the disease; but it was in the early part of the seventeenth that it was first accurately described by François Citoys of Poictou. He attributed its occurrence to the use of the white wines in that part of France, and stated that it prevailed almost exclusively in cold and damp weather. Bonté, another French physician who practised in Lower Normandy, ascribed the colic to the use of bad cider, that is made from sour apples; so did an English physician, Huxham, early in last century. In Spain, the wines, acid fruits, the too free use of ices and of acid drinks, were variously regarded as the cause.

The affection usually begins with symptoms resembling those of ordinary dyspepsia—failure of appetite, pain in the stomach and belly generally, at first slight and transient, after a time becoming severe and lasting. Soon there is a marked tendency to constipation of the bowels, and a remarkable languor and depression of spirits. These symptoms, at the outset of the complaint, are bearable, and do not prevent the patient following his usual occupation; after some days, or at most weeks, however, they become altogether unendurable, specially through augmentation of the pain in the belly, which has by that time assumed the character of colic in its severest form. Though the disease usually commences in the way now described, there are instances in which it has become suddenly developed. The pain is of a most severe description, causing great restlessness, bending and doubling of the body; and albeit the sufferer be possessed of heroic fortitude, he will give way to groans. As in

ordinary colic, the pain is further paroxysmal; it seldom subsides entirely, but it becomes modified, while at times excessively painful attacks occur. At night these are apt to be worse than during the day. The countenance wears an anxious look; nausea and vomiting often are present; the tongue becomes flabby, often tremulous; the breath very fetid; the gums at their margin have a bluish-gray line. This most important sign of the action of lead on the system was first pointed out by Dr. Burton; while Mr. Tomes, the eminent dentist of London, has shown that a chemical action takes place between the tartar of the teeth and the lead, and that sulphuret of lead is formed, to which the peculiar blue gum is due. At this stage of the disease, the face is pale, dingy, and sallow. And now succeed even more formidable symptoms: the hands become tremulous, great weakness of the wrists is experienced, and palsy, in a more or less marked degree, established. The affection of the hands, attended by muscular wasting, which is peculiarly seen in the balls of the thumbs, may succeed the colic, or be developed during its continuance. Not unfrequently there occur repeated attacks of the spasmodic pain in the belly, and then suddenly the patient finds he has lost the full power of using one or both hands. The condition of the arms and hands thus affected is quite characteristic; and if a person so suffering either has at the time, or has lately had, colic—still more, if he be a worker in lead, and if his gums present the blue line—his case may be pronounced one of *Colica Pictonum*, or lead colic. If, in such circumstances, the cause of the disease remains undiscovered, and the required treatment be not adopted, the condition of the patient will soon become hazardous; a state of general debility follows; and he may be carried off by the occurrence of an inflammatory affection in the bowels, or by convulsions, or the limited palsy may extend, and a more general paralysis precede the fatal event.

When the disease is recognized and properly treated, it is rarely fatal. Of 3,569 cases which occurred in Paris, 95 died, or about 2·7 per cent. M. Andral, in his excellent work

*Clinique Medicale*, mentions that, during the course of eight years, M. Lerminier treated, in the Charité Hospital, more than 500 cases, of which only 5 died. Relapses during the progress of recovery have been noticed as not uncommon.

The gradual introduction of lead into the system has already been mentioned as the great cause of this very serious affection. The determination of this important point we owe to Sir George Baker, whose attention was strongly directed to the investigation of the so-called Devonshire Colic. He found this ailment common among the cider-drinkers, and traced its occurrence to the mixing of lead with the cider, either of design in order to sweeten it, or used inadvertently in the construction of cider-mills and vats. When once attention was called to the subject, it was found that the same cause was likely to operate in the various situations where the disease prevailed. The wines of Poitou and Spain were treated with lead to prevent them turning sour. In the West Indies, rum was adulterated with lead. In our own country the affection was chiefly met with in one class of operatives—namely, painters; hence it was also called Painters' Colic. White lead is used, as every one knows, in the preparation of their colours. It was determined, moreover, that certain persons manifest a great susceptibility to the injurious influence of lead. Such will suffer from colic after sleeping for a night or two in a newly-painted room. Another cause, and one from which not a few have suffered, is the drinking of water which has become impregnated with lead when passing through metallic pipes.\* In 1832, the cause of an epidemic of colic among the troops at a station in the island of Ceylon was traced by Dr. Alexander Smith to the presence of lead in a sample of coarse sugar which the soldiers were using. Dr. Hassall

\* Two instances of this kind have occurred in Great Britain during the last twenty years. One at Clermont, the residence of the ex-royal family of France; the other in a northern county, at a seat of one of the most deservedly respected of Scottish noblemen. This subject has been carefully investigated by Dr. Christison; and to his well-known work on Poisons the reader is directed for much interesting information; also to Dr. Taylor's Treatise on Poisons.



(see his work on *Adulterations*) has pointed out that lead-poisoning may result from the use of snuff containing red oxide or yellow chromate of lead, introduced as adulterations.

In the treatment of lead colic, just as in that of the simple form of colic already considered, the great object is to obtain free action of the bowels; and, as in the latter, purgatives and anodynes may be administered by turn. For this purpose no medicine is better than castor oil, with a little laudanum or solution of morphia. It has, however, been shown by a French physician and chemist—M. Melsen—that a particular salt of potash, the iodide of potassium, has the property of dissolving the salts of lead (also of mercury) in the system. It is argued that, in lead colic, the lead is in intimate union with the tissues of the body, and is retained in the system in a form quite insoluble by the animal fluids. The iodide of potassium, however, acts, and then there results a soluble compound—an iodide of lead. This salt is taken into the blood and carried out from the body in the urine and perspiration. Dr. Parkes of London, and Dr. Swift of New York, besides many other physicians, have confirmed the accuracy of M. Melsen's observations. Recently, the author treated a severe case of lead colic in a painter by means of the iodide of potassium, with the happiest results. The remedy should be given dissolved in distilled water, in doses of from 5 to 20 grains thrice daily. When the paralytic affection has resulted, a further great object is to restore the muscular vigour. This is best attempted by means of galvanism and electricity (see *Galvanism* and *Electrization*, in Appendix); and, at the same time, by the use of the nux vomica, or of its alkaloid, strychnia (which see, in Appendix).

Of course, in the treatment of such cases, every care must be taken to prevent any further entrance of lead into the system. In order to obviate the occurrence of lead-poisoning in those who are of necessity exposed in a greater or less degree to its influence, frequent ablutions of the hands and surface of the body should be practised; while the distin-



guished Baron Liebig has suggested the use of sulphuric acid lemonade as a beverage, so that, in the event of any lead being taken into the system, an insoluble sulphate of lead is formed. Mr. Benson, the manager of the British White Lead Works in Birmingham, has recorded his successful employment of this method of preventing the occurrence of the disease.

**CONSTIPATION**, or Costiveness, is that condition of the bowels in which the stools are less frequent and less in amount than in the healthy state. This is among the most common of the ailments for which the advice of the physician is sought. A faulty diet and sedentary habits are the main causes of its production.

Constipation may be either occasional or habitual. In certain persons there exists a marked constitutional tendency to constipation of the bowels; and in such, while the condition, with its attendant discomfort, may be partially relieved, it frequently happens that it cannot be altogether overcome. The direct or immediate causes of constipation most frequent in their operation are, failure in the contractile power of the muscular coat of the bowels, and an alteration in the quality or diminution in the amount of the intestinal fluids which serve as alvine stimulants. Of these, the bile is the chief in importance.

Let it be held in remembrance that a very considerable variety exists in regard to the interval at which passage from the bowels occurs in different individuals. While, undoubtedly, most persons in health have one evacuation in the course of twenty-four hours, there are not a few whose bowels are moved only every second or third day; and instances are familiar to every physician in which the maintenance of good health seems to be in no degree inconsistent with a single hebdomadal evacuation. Again: though alvine evacuations occur at regular and brief intervals, the condition of constipation may be said to exist if the dejections be deficient in amount. It not uncommonly happens in such circumstances, that while a portion of each stool is passed,

another portion is retained. In this way an accumulation of feculent matter in the lower bowel takes place, which is apt to be followed by various disagreeable symptoms.

Allusion has already been made to the well-known frequency of constipation in those who follow sedentary occupations. It is also liable to be induced by whatever tends to weaken the system generally—as excessive exercise or much fatigue, however occasioned ; while habit has, perhaps, as important an influence in its production as any other cause. It is a very unwise proceeding to neglect the calls of nature ; so doing, the lower bowel becomes, as it were, habituated to the distention which is caused by the accumulation of feculent matter, and constipation is directly induced. In old age the muscular system of the body has become weakened, and, as a consequence, costiveness results. When the function of the liver is in any degree suspended, and healthy bile does not reach the bowels in due amount, there exists a fruitful source of constipation ; hence the absence of the biliary colour from the stools, which is so often noticed in those who suffer from constipation, and specially in children.

The sufferer from costiveness is subject to various uneasy and oftentimes distressing sensations, both in the bowels themselves and at a distance from them. Headache, lowness of spirits, derangement of the stomach, failure of appetite, are among the most common and ordinary of its effects.

In the treatment of constipation, reference must be had to whether the condition be occasional or habitual. In the former case recourse should be had to laxative remedies. Among the best of these is castor oil ; it is usually efficient, and it is eminently safe. Senna, in the form of its tea or fluid extract, sulphate of magnesia, and calomel, are others which may be employed. Should delay in the operation of the purgative occur, then an enema may be administered, consisting of warm water with a little castor oil and salt, in the proportions mentioned in the Appendix (*Enemata*). Opposition to the entrance of the injection, as well as the ineffectual administration of laxative remedies by the mouth,

may reveal the impaction of the rectum by hardened feces. Such being the case, a finger or the handle of a spoon should be introduced into the bowel, and the mass thus broken up.

In the treatment of habitual constipation something more than a resort to the use of laxatives is to be advised ; indeed, the adoption of the former plan alone is to be discouraged. There is such a thing as a laxative diet, and this the patient should adopt. Coarse bread is preferable to that made from the fine flour of the grain, brown bread to white. Fruits in their seasons, unless known to disagree, may be moderately indulged in (for directions on this subject, see observations in Part IV., under *Diet*, p. 242). Vegetable food is decidedly more laxative than animal, specially the succulent vegetables, and such should be used with discretion. Oleaginous and fatty articles have also a laxative effect: olive oil, butter, the fat of meat, come under this denomination. In addition, at every meal, and specially at dinner, water or some other bland fluid should be drunk: a dry diet tends directly to produce costiveness. Bodily exercise is an important means for overcoming habitual confinement of the bowels—exercise on foot is best, riding on horseback comes next. Manual labour, as in gardening, for the resident in the country; and rowing, which summons all parts of the body into active use, make good substitutes. When diet and regimen fail to produce the desired effect, they are not to be neglected ; on the contrary, with continued strict attention to both, the patient is to have recourse to certain simple and safe remedies. Among these may be mentioned, first of all, the diurnal injection of a small quantity of cold water into the bowels. In many cases this expedient is eminently successful, and, cautiously used, it may be employed for a lifetime without producing any bad consequence, or in any degree injuring the parts (see in Appendix, *Injections* and instruments for the purpose). Of course, those cases alone are likely to be benefited by injections in which the hardened mass is brought down to the lowest part of the bowels. When this does not occur, then laxatives must be administered by the mouth. In the selection of these, let the simplest be re-



garded as the best, and let attention always be paid to the precise circumstances of the patient. Is there acidity of the stomach, a little magnesia, or bi-carbonate of soda (see Appendix) may suffice to produce the desired effect. Sulphur is another remedy easily taken, and specially useful where there exists any tendency to piles or irritation about the seat. In such circumstances, also, the compound liquorice powder proves very serviceable (see Appendix). Does a deficiency of bile—as evidenced by the pale colour of the evacuations—seem to determine the constipated habit, then an occasional dose of calomel or blue pill may be required; but an appeal to the liver by taraxacum, in the form of its fluid extract, continued for a little time, will scarcely fail to do good. Is the contractile power of the bowels themselves enfeebled, as it often is, then a small quantity of the extract of nux vomica (see Appendix), in combination with rhubarb or aloes, is a useful remedy. The ordinary compound rhubarb, or colocynth pill of the pharmacopœia, or a well-known nostrum sold as Lady Hesketh's pill, has often proved serviceable. Medicines taken for the purpose now under consideration should be administered shortly before meals. Along with these means, cold sponging, the shower-bath for those of more robust constitution, and the use of the flesh-brush, are to be recommended. Not a few cases of constipation have at length been overcome by the employment for a considerable period of the electro-galvanic battery, applied in the manner stated in the Appendix. Persons suffering from habitual constipation should be warmly clad, and during summer as well as winter wear flannel over the chest and belly.

**CONSUMPTION.** As synonymous with Consumption, the term Phthisis is now employed, the latter being derived from the Greek verb *phthio*, signifying to waste away. The word phthisis, therefore, literally means a consumption; and in this sense its application may be considered as appropriate to all diseases which are accompanied by general wasting. In this country, however, it has of late years been restricted



to that particular form of wasting disease in which a peculiar morbid deposition takes place in the lungs. The morbid matter thus deposited is known under the name of tubercle; which undergoes subsequent changes, in particular a softening process, and the lung substance in consequence becomes broken up, or cavities in it are formed.

Consumption is the most frequent, as well as the most fatal, of all pulmonary diseases. It has been calculated that in most large towns a fourth, and rarely less than a fifth, part of the mortality results from consumption. According to the Registrar-General of England, the proportion of deaths from this disease (in London) to the whole population is 1 in 262. The same authority has pointed out that four in every thousand persons die annually of consumption, and that from one-fifth to one-sixth part of the whole mortality in England and Wales is from this disease. Dr. Swett, an able American writer on diseases of the chest, has stated the proportion of deaths from consumption to the whole population of the chief American cities as follows:—In Boston, 1 in 236; in New York, 1 in 267; in Baltimore, 1 in 290; in Charleston, 1 in 246.

Age plays an important part as a cause of consumption. It is commonly stated that consumption seldom occurs before fifteen or after thirty-five years of age; a more correct statement, however, would be, that after fifteen fully one-half of the deaths occur between the twentieth and fortieth year. The Registrar-General of England has calculated, according to the metropolitan life-table, that of 1000 persons alive at the beginning of any year between the ages of twenty and thirty, about 4·7 die in the year following from consumption. Of those alive between thirty and forty, nearly 5·3 in 1000 die. To those between forty and fifty the danger from consumption is greatest, for 6·6 in 1000 die. Thus the mortality from consumption increases 1·75 per cent. with every year; 19 per cent. every ten years of life from the age of twenty to fifty. These calculations appear to confirm, in a remarkable manner, the observation formerly made by Dr. Young in his work on Consumption, that “if we consult the records

of actual registers of cases we shall find that the disease is even more frequent above thirty-five years than below it." The result of more recent investigations by Sir James Clark, Louis, and others, and more especially of the careful inquiry into the mortality of the Scottish Widows' Fund, and the Standard Life Assurance Companies, by Dr. Begbie and Dr. Christison, has been to show that consumption may, and does, occur at all periods of life—in early youth as well as in old age; that it is, however, more frequent, and therefore more fatal, under forty years than above; and that between the ages of twenty and thirty, and those of thirty and forty, it is probably equally common and equally fatal. Though less frequent in its occurrence after forty, it is by no means uncommon; and at that period of life, contrary to the expressed opinion of Dr. Alison, consumption is to be found among the higher as well as the lower ranks of life.

As regards the influence of sex upon the development of consumption, opinions differ. That for a long period usually received was, that it prevailed more among females than males. M. Louis of Paris, the most original writer upon, and most careful investigator of, the phenomena of this disease, has so stated his belief; and the reports furnished by the hospitals of Paris and Berlin amply confirm it. It appears, however, that the opinion thus founded is neutralized by what has been observed in such cities as Hamburg, Rouen, and Naples, in which males have suffered in larger proportion than females.

A far more important subject in relation to consumption is its hereditary transmission. By this expression it is understood that those whose parents and near blood relations have been affected by certain diseases—consumption, for example—are more liable to be attacked by these same diseases than those whose relations have exhibited no such tendency. It will be observed that this definition simply embodies the statement of a supposed fact, and does not pretend to offer any real information in regard to the cause or causes of consumption. Upon this point the experience of Life Assurance Societies is very important. It is well

known that a very close interrogation takes place regarding the family history of the applicant for assurance benefit. In the experience of the Scottish Widows' Fund it was found that, in ten out of fifty, an hereditary taint of consumption might have been inferred from the circumstance of one near or two or more distant relatives having previously fallen victims to it. In one instance an insurer had lost a brother and sister by consumption; six had each lost a brother; one his mother. Sir R. Christison has observed: "There can be no doubt that the much greater loss has been saved by the vigilance of insurance directors and their medical officers in avoiding consumptive risks." This expression may be rendered in different words, by admitting the advantages which have accrued to insurance offices by the careful examination into the family history of every applicant, which has of late been almost universally practised. By this means the pecuniary loss in such offices from consumption has been very greatly diminished. How could a better proof be afforded of the existence in phthisis of an hereditary transmission? Briquet, in Paris, found, of ninety-eight cases of consumption, thirty were born of consumptive parents,—that is, nearly 30 per cent. Dr. Swett, judging from private practice, has stated that 75 per cent. of consumptive patients belong to phthisical families.

We can here only take a hasty glance at those circumstances of life which seem to engender a predisposition to consumption:—

Foremost among these must be ranked poverty; for, though this disease attacks all ranks and conditions of men, the cause now stated is admitted by all to play an important part. Poverty, however, seldom, if ever, occurs alone; exposure, anxiety, bad nourishment, and the inhalation of an impure or confined atmosphere, accompany it; and, while the single influence of each cannot be correctly calculated, the potency of their combined operation it is impossible to overestimate. Lombard informs us that in Geneva the proportion of deaths from consumption among those living



upon their incomes is only 50 in 1000, while the average deaths from the disease in all classes is 114 in 1000. Sedentary habits, too, exercise a pernicious influence, more especially the sitting constantly with the body leaning forward; both respiration and digestion are thus interfered with. Violent exercise, if followed by marked depression, acts deleteriously; while moderate exertion has quite the opposite tendency. The inhalation of various substances, gases and vapours, exerts a very injurious action on the system generally, while some act more decidedly on the lungs themselves. Benoiston has stated that gilders, who are exposed to the inhalation of a mercurial vapour, die from consumption in the proportion of 53 in 1000; while among painters, whose trade is far from wholesome, but who inhale no mercurial, only saturnine vapour, the ratio is reduced to 21 deaths in 1000. The inhalation of dust, whether mineral, animal, or vegetable, is most injurious: such as arises in the manufacture of steel, flints, sandstone; the dressing of feathers or hair, and that of cotton. Dr. Alison has pointed out, and the fact is now familiar to all medical men, that stone-masons suffer from consumption in an unusually large proportion. Those who work under wooden sheds, as is the case in Edinburgh, seem to suffer even more than those who carry on their operations in the open air. This shows that the exposure incidental to the trade is not the cause of the greater mortality; and, if it were so, the builders would be affected equally with the hewers, while the contrary obtains.

Climate and season, no doubt, play a part in the development of consumption; but upon this subject professional opinion has undergone a considerable change since our knowledge became more extended and precise. The disease occurs in all latitudes, in temperate as well as in tropical climates. Some situations there are, unquestionably, freer from it than others, but none appear to be wholly exempt. Every one knows the fearful ravages consumption makes in this country; in America it seems to be equally formidable; Italy, and the most southern parts of it particularly,



to which consumptive patients were formerly sent from this country in large numbers, is no freer from the disease than Great Britain. The Indies have it. Perhaps of all countries those more northern suffer least, the colder regions of the globe. In Sweden the ratio of deaths from consumption is only 63 in 1000, while in London it is 236. In Canada not 7 in 1000 men are attacked annually, while in the West India Islands 12 in 1000 suffer (*British Army Reports*). Dr. Forry, in his account of the American Army, has shown that the smallest ratio of mortality from consumption is found at those posts in the northern division of the United States which are most remote from the ocean and the lakes. As we shall have occasion to observe when mentioning the proper treatment of consumption, there is no doubt that a dry atmosphere and an equable climate are two most favourable circumstances, and in a preventive as well as a curative capacity both act.

Bad and imperfect nourishment exercises a most injurious influence in this disease. In proof of this, nothing can be more striking than the amelioration, even in very advanced cases of consumption, which results when patients who have thus suffered are received into hospitals and supplied with wholesome food in sufficient quantity. Intemperate habits exert an injurious influence; not so much perhaps, it may be allowed, the actual abuse of intoxicating drinks, as the exposure, and deprivation of suitable nourishment, which, to a certain extent, always accompany that lamentable vice. Excessive venery predisposes to, as well as aggravates in a remarkable manner the progress of, consumption. This disease not unfrequently, in those who have the tendency to it, is developed on the decline of some acute affection of the chest. Doubly careful should be the management of a case of inflammation in the chest in one who has manifested any tubercular taint, or in whose family consumption has shown itself.

While the different causes which have now been enumerated have been observed with such frequency as to invest them with the character of operating more or less injuri-

ously, there are, on the contrary, certain circumstances and conditions which equally appear to act in a favourable manner. Allusion has already been made to the good effects of an easy lot in life. Active employment of mind and body, regular exercise in the open air without exposure to cold and damp, are among the chief in such operation. Lombard, as well as others, have noticed the beneficial influence of animal and vegetable emanations. To inhabit a room over a byre or cow-house was an old prescription for the consumptive invalid. As certain trades seem peculiarly obnoxious to this disease, so are there others which carry with them exemption, at all events to a limited extent; such are those of butchers, tanners, and leather-dressers.

Physicians in this country do not consider consumption to be a contagious disease; but by Spanish and Italian, as well as by not a few French medical men, it is regarded as being capable of transmission from the sick to the sound.

It is a commonly received opinion in the profession, that the sufferer from tubercular disease in the lungs—in other words, consumption—as well as in any other part of the body, possesses a peculiar or specific bodily constitution or diathesis. This is denominated the scrofulous constitution, the particular morbid condition itself being called *scrofula* (see *Scrofula*, p. 196).

There are a few points of great interest as well as of importance in connection with the deposition of tubercles in the lungs, to which a brief reference may here be made. In the great majority of instances, tubercles are first deposited in the upper parts or apices of the lungs; in these situations the softening change already referred to first occurs, and there also cavities or vomicæ are first formed. In consumption, though both lungs usually suffer, the left lung is the one most frequently and seriously affected. This has been established by the careful inquiry of M. Louis of Paris. This distinguished physician met with seven cases in which one lung alone was affected: in five, the left; in two, the right. In thirty-eight cases in which the disease existed in a very advanced degree in the upper parts of the lungs, twenty-

eight were on the left, only ten on the right side. Not unfrequently, in the course of consumption, the windpipe and vocal chords become affected; tubercles are deposited there, and ulcers form, giving rise to many most distressing symptoms. Other parts and organs of the body are, moreover, apt to become involved; the bowels rarely altogether escape; the liver, too, becomes variously affected; so do the kidneys, and not unfrequently the brain.

Reference must now be made very shortly to the chief symptoms, and then to the treatment of consumption:—

In illustration of the first, it will be convenient to follow the method of consideration adopted by the distinguished French physician Andral. He divides the more ordinary symptoms of consumption into three classes. In the first are placed those which depend directly on the presence of tubercles in the lungs; such are cough, expectoration, &c. In the second, those symptoms which are developed after pulmonary tubercles have been deposited, indicating an affection more or less severe of various functions; of these are fever, emaciation, perspiration, &c. In the third class are ranged those symptoms which are associated with the existence of one or other of the complications so common in the course of consumption; these may be complications in the chest, as inflammation of the lung, or the investing membrane of the lung, the pleura, &c.; or in distant organs, as when, for example, the bowels become the seat of tubercular deposit, and diarrhœa, as well as other symptoms, are developed.

As a general rule, consumption has no marked symptoms to afford evidence of its invasion; on the contrary, its origin may be said to be insidious. Though patients may at times be able to ascribe the first occurrence of symptoms to a certain cause,—as, for example, exposure to cold,—yet far more frequently the exciting cause, as well as the primary symptoms, are alike obscure. A slight cough, more annoying, by reason of its continuance, than severe in its nature, what patients themselves very often style an irritating cough, languor, and an easily induced feeling of fatigue, a slight



emaciation, and sometimes a tendency to night perspirations; these are among the number of the most commonly observed early symptoms. It may happen that the origin of the disease is more decidedly marked: a sudden and copious expectoration of blood has many a time been the first intimation a patient has had of the existence within of a grave disease. This occurrence has been noticed from the very earliest period of medicine. Hippocrates, the father of medicine, devotes an aphorism to it; and for a long period in nosological arrangements, phthisis originating in expectoration of blood (haemoptysis) was erroneously included as a distinct disease. There is, however, probably no medical man who has not observed cases of this kind.

Cough is, in the great majority of instances, the earliest symptom of consumption: at first it is slight, dry also, unaccompanied by any expectoration: it occurs, too, for the most part, at particular times—upon rising from bed in the morning (this is always to be looked upon as a suspicious circumstance), upon making any violent exertion during the day, and again at night. The cough of consumption may, however, cease almost entirely for a considerable period; it is apt to do so in warm weather, to return again in cold. It may, on the other hand, attend the disease throughout, becoming by degrees increased in severity, and often acquiring a convulsive character, the patient suffering from fits of coughing. Cough coming on without any adequate cause is an alarming and suspicious circumstance, and its occurrence in such a manner, even if unassociated with other symptoms, will always lead the physician to make a most careful inquiry in regard to the state of health of the person so affected, and in particular to practise a special examination of the chest by all those means which the science of medicine now possesses. These means are usually included under the head of physical diagnosis; the most important of them, in such cases as are now under consideration, are auscultation\* and

\* Auscultation, from the Latin verb *auscultare*, which signifies to listen to attentively, is a mode of distinguishing diseases, more particularly of the chest, by observing the sounds in the part. To Laënnec, the illustrious



percussion.\* The former, for the most part practised with the aid of the stethoscope,† enables the physician's trained ear to detect changes in the sounds of respiration, and thus to acquire a knowledge which is of infinite importance to himself and highest value to his patient. Equally serviceable is the latter, by which the absence or imperfection of the normal resonance over the lungs is determined.

The matter expectorated in the early stage of consumption is not characteristic,—unless there be an admixture of blood, it consists of altered mucus,—and no marked dissimilarity is to be noticed between it and that expectorated in bronchitis. When great difficulty attends the expectoration, it will be frothy; when collected in a vessel, it is generally seen as ropy, stringy, yellowish masses, in a thinner or transparent fluid. Sooner or later a change in its appearance occurs: pus, at first mixed with mucus, is seen, and then the whole of what is expectorated becomes purulent. This variety of sputum often attracts flies in large numbers. Sometimes the expectoration assumes a peculiar form: flat, globular, or rounded masses, remaining distinct and separate if not spat into water; called, from their resemblance to pieces of coin, nummular sputum. This variety, more than any other, is considered characteristic of an advanced stage of consumption; complete reliance cannot, however, be placed upon it, as it occurs also occasionally in bronchial affections. In various stages of the disease, portions of tubercular matter, little curd-like fragments, and particles of the lung substance, and mineral matter into which tubercles tend to pass, may be expectorated.

Spitting of blood, which is so common a symptom in con-

French physician, belongs the great merit of the modern introduction and greatly extended application of auscultation.

\* Percussion, from the Latin verb *pereutere*, which literally means to strike through and through, is that method of determining the existence of diseases which consists in striking with the fingers over the walls of the chest or belly. As practised in recent times, percussion may be considered as the discovery of a German physician, Auenbrugger.

† Stethoscope, from the two Greek words, *stethos*, the breast, and *skopein*, to contemplate, is the name given by Laënnec to the instrument which is employed for the purpose of auscultation.

sumption, occurs at different periods of the disease; it may, as already stated, be the earliest observed, or it may not occur till late, and there are not a few instances in which it never takes place at all. To give a just conception of the importance of this symptom, the statement of Louis may be quoted. Excluding cases of mechanical injury to the chest, which are often followed by spitting of blood, and cases of disordered menstruation, among twelve hundred patients he did not find a single example of spitting blood except among the phthisical. It is a common expression, in connection with this symptom, to say that a blood-vessel in the lungs has been broken or ruptured. In the great majority of instances, however, in which spitting of blood occurs this expression is an erroneous one. Blood escaping by the mouth from the lungs may come from a breach in the walls of some vessel, and that vessel may be of considerable size; but in by far the majority of cases in which it occurs, the blood passes from the innumerable minute capillary vessels which are distributed to the mucous membrane of the lungs. There may be repeated attacks of spitting of blood in the progress of consumption; the first attack is generally the most severe. Dr. Walshe of London, who has devoted much attention to this disease, has pointed out that the frequency of blood-spitting increases with advancing years,—certainly in very young patients affected with phthisis it is very rare,—and that the most common periods for its occurrence are at the very outset of the disease, or after the expiration of the first month. Men would appear to suffer from it a little more frequently (4 per cent.) than women. The quantity of blood expectorated varies extremely; a few red streaks, unmistakably, however, produced by blood, may alone be present, or pints of the precious fluid may be lost. Sometimes the blood is very dark, at others quite florid.

Difficulty of breathing is not often marked till the disease is considerably advanced, then a short and hurried respiration is often seen. Pain is not usually an accompaniment of tubercular deposition in the lungs, but a stitch, often very severe, is not unfrequently met with; it, however, is more

connected with some change of an inflammatory nature in the pleura, or investing membrane of the lung.

Hectic fever (from the Greek word *hektikos*, habitual) usually creeps on insidiously: in advancing consumption there is often seen the flushed countenance; the sense of coldness or chilliness; perspirations occurring chiefly during sleep, and often profuse; pulse then frequent, and becoming from day to day feebler. Emaciation, moreover, has set in, and, more or less rapidly, bodily strength and flesh are passing away.

These symptoms, thus briefly indicated, fall under the second head of Andral's arrangement. Of the third, or complications, there are several; the more common in their occurrence being diarrhœa, or great looseness of the bowels—a most unfavourable, but by no means a universal symptom, for in not a few cases it never occurs. In the advanced stages it is most dangerous; and in allusion to the rapid manner in which—alone, or in combination with other symptoms, and chiefly profuse nocturnal perspirations—it rapidly reduces a patient's scanty stock of strength, it is called *colliquative*—literally, melting away. In those cases in which this symptom proves lasting and intractable, it depends on the deposition of tubercular matter in the bowels, and the ulceration which invariably follows. The digestive function is prone to suffer in consumption. No doubt, in many instances the appetite holds good for a long period, but there are few in whom, from time to time, there does not occur some difficulty in connection with it; and with many, from the commencement to the close, the desire for food is gone, and with it the best means the physician has of being useful to a consumptive patient. In females, the menstrual function is usually from an early period suspended.

Certain physical peculiarities, common to both sexes, have been noticed in those affected by phthisis, as well as in those who may be regarded as having a proclivity towards it: such are a constantly and often extremely dilated condition of the pupils of the eyes; a clubbed form of the nails and extremities of the fingers; the presence of a reddish, sometimes purplish line along the junction of the gums and teeth;



and, lastly, the growth of hair down the back, in the neighbourhood of the spine.

The duration of consumption varies very considerably, so much so as to have led to the adoption of the terms acute and chronic in relation to it. There is the case of extremely rapid progress, in which a person, almost invariably young, apparently in the enjoyment of health, though undoubtedly manifesting in greater or less degree those features which mark the scrofulous constitution, is suddenly affected with cough and febrile excitement; in whom, very shortly, some of the other symptoms already referred to become developed, and death, within a period of a few weeks, occurs. Such is appropriately enough named galloping consumption. On the other hand, and in marked contrast, there is the case of very slow progress,—and those who thus linger are often of a more advanced age,—in which cough and expectoration, with perhaps certain other symptoms, have lasted for months, it may even be years. The medium between these two extreme cases includes by far the larger number of the sufferers from consumption. And in order to give a just notion of the average duration of the disease, the following table, containing the results of Bayle and Louis's observations, may be consulted. Of 314 cases—

24	died	within	3	months.
69	"	between	3	and 6 months.
69	"	"	6	" 9 "
32	"	"	9	" 12 "
43	"	"	1	year and 18 months.
30	"	"	18	months and 2 years.
12	"	"	2	and 3 years.
11	"	"	3	" 4 "
5	"	"	4	" 5 "
1	"	"	5	" 6 "
3	"	"	6	" 7 "
1	"	"	7	" 8 "
3	"	"	8	" 10 "
11	"	"	10	" 40 "

Thus, more than one-half died within nine months from the time when the disease declared itself. Dr. Gregory spoke



of the duration of phthisis as about six months: this is certainly within the average period; perhaps the truth is as nearly as possible approximated by stating that phthisis usually terminates within twelve months. It must, however, be distinctly understood that numerous instances far exceed that period in duration; and further, that the means now generally employed in the treatment of the disease appear to exert the power of, at all events, procrastinating the fatal event.

In the great majority of cases, consumption terminates by the gradual undermining of the patient's strength. As conducing to this end are the long continuance of such discharges as the purulent expectoration and diarrhoea; suffering of various kinds, specially the harassing cough; want of sleep; the small amount of food which is taken,—probably less digested; and the febrile excitement. But a more sudden termination may occur by profuse spitting of blood, or a perforation in the bowels at the seat of a tubercular ulcer, or the perforation of the lung; these have, in many instances, been the causes of rapid death in cases which, perhaps for a considerable time, had been advancing but very slowly. Moreover, death may be determined by one or other of the complications which have been noticed, by liver or kidney disease, or by affection of the brain. In uncomplicated cases of consumption, the mind often remains unclouded to the very last, while the patient's hope of ultimate recovery is frequently maintained in cases apparently the most desperate.

A few remarks must now be made on the treatment of consumption:—

Consumption, as is very well known, was long considered to be incurable; it may, however, now be regarded as a curable disease;—that is to say, persons affected with the general symptoms, and presenting the physical signs (as determined by auscultation, percussion, &c.) of tubercular deposition in the lungs in all its stages, do again acquire a fair share of health and strength; in some rarer instances a complete restoration of both occurs; while the physi-

cal signs, being for a time stationary, afterwards undergo such modifications as are alone reconcilable with favourable changes occurring in the lungs. This opinion may be objected to by some, but it is grounded on carefully observed facts, recorded, moreover, by those who are the most skilled and eminent in the profession of medicine. A further and most important corroborative testimony is found in the morbid anatomy of tubercular disease in the lungs. Appearances in these organs are frequently met with, which are now almost universally accepted as the evidence of a retrograde process, of a healing or curative action.

There is no doubt that a very remarkable change has taken place in professional opinion regarding the proper treatment of consumption. At one time it was supposed that for this object the great aim to be kept in view was the abatement of inflammation; hence, the remedies chiefly, and at certain epochs universally, employed were of the antiphlogistic (literally, what tends to counteract preternatural heat, used in medicine to indicate those remedies which are useful in the treatment of inflammation) character—blood-letting, purgatives, emetics, sedatives; while the approved diet was of the lowest description, consisting of farinaceous articles and fruits. Now, on the other hand, without denying the occasional, and at times intimate, connection which subsists between tubercular deposition in the lungs and inflammatory action, physicians are wont to associate the former, very especially, with the existence of a dyscrasia, or bad constitution, in which the vital powers are much enfeebled, and, after a time, greatly reduced: these require to be sustained, and hence a nourishing diet, and a stimulant rather than depressing system is called for.

A most important object to be attended to in the treatment of consumption, and one which should never be lost sight of as a means for preventing the development of the disease, is the inhalation of a pure atmosphere.\* Persons

\* See this subject placed in its true light, as well as the disastrous consequences of neglecting what in most circumstances may, with a very small amount of trouble, be obtained, in a little work, *On the Nature, Treatment,*

affected with or threatened by consumption should spend as much time as possible in the open air—as long a portion of each day as their own strength and the state of the weather will allow. The really great advantage which consumptive patients derive from a residence in a mild climate, consists in the greater opportunity which is almost invariably thereby afforded for occupation in the open air.

In all cases of consumption a strict regard must be paid to the constitution, habits, and special circumstances of the patient, whatever these may be. Though consumption does not, in all cases, result from inflammatory action, there is good reason to believe that, in the progress of the disease, tubercular deposition not unfrequently gives rise to inflammation. A case may occur in which a full and generous diet will be for a time well borne, but anon symptoms indicative of inflammatory excitement come on; to persevere then with the former plan would be worse than foolish; it must be suspended, and to a lower diet, with perhaps some antiphlogistic remedy in addition, will be the appropriate change.

The hygienic treatment of consumption is, then, always to be regarded as of the greatest possible importance. Diet should consist of what is at the same time most nutritious and most easily digested (see remarks under the head of *Diet*, in Part IV., p. 242). Meals should be taken at regular intervals, and there should always be the most careful regulation of the digestive organs. Exercise in the open air, whenever practicable, is to be recommended. It may be active or passive; that is, walking on foot, or borne in a carriage or on horseback. Sponging of the surface of the body, and more especially of the chest, with cold or tepid water, over front and back, besides being very refreshing, is often directly salutary, and should never be neglected; for in this, as well as in many other diseases, it is of very great consequence to maintain a proper exercise of the cutaneous function. Stated exercise of the respiratory muscles—as by

*and Prevention of Pulmonary Consumption*, by an able Irish physician, Dr M'Cormac of Belfast.



making deep inspirations in the open air, or by gentle gymnastics—should be practised. A due amount of sleep (see under this head in Part IV., p. 247) should be indulged in: it is most consistent with health to go early to bed and to rise early in the morning. A change of occupation is to be counselled in the instance of those whose labour is heavy, or mental occupation great, for both of these should be avoided.

The great desideratum for the consumptive patient in the way of climate is one at once dry, mild, equable, with as little as possible variation between day and night, and least of all liable to sudden alternations. There can be no question that many cases of consumption are much ameliorated by a change of climate. That good effects may follow, it is, however, essential that the change be made at an early period of the malady. When active disease is going on, and more particularly when that stage of tubercular ailments which has been alluded to under the name of softening has been reached, then the fatigue of a long journey, and almost necessary discomfort entailed by a residence from home, do much more harm than good. A judicious change, practised early, seems in some to have completely arrested the disease; in many, without effecting so much, life has, apparently through its means, been greatly prolonged; in certain other cases the most unfavourable symptoms have been subdued, and the termination of life smoothed and rendered infinitely more comfortable. (Under the head of *Climate*, in Part IV., p. 247, will be found some further observations on this subject.)

What is of far greater consequence, however, than any mere change of climate, is the influence of a pure, fresh atmosphere. Very special care should be taken that the sleeping apartment occupied by a phthisical patient is duly ventilated—that in it, to as complete an extent as possible, there is a free circulation of pure air. Of course due provision must be made against the introduction of a cold or chilly atmosphere: but, in the opinion of the author, the “night air” has been regarded too much in the light of a



bugbear ; for not only is he satisfied that the temperature of the bed-room can be, with sufficient care, properly maintained, while a pure air is permitted to enter, but he is, to the full, inclined to agree with Dr. M'Cormac, whose work has been already referred to, that "the night air as such never injured any one ; it is only impure or chill air that does so." (See, under head of *Ventilation, Temperature, &c.*, in Part III., p. 238, some further observations, with more extended application of this subject.)

As to the various special remedies which have been employed in the treatment of consumption, the number of such is so very large that reference can, with few exceptions, only be made here to those which still deservedly maintain professional confidence :—

Foremost among these is the cod-liver oil. An oil obtained by ebullition with water from the fresh livers of several fishes—the ling and skate, as well as the cod—has long been a domestic panacea in strumous affections and chronic rheumatism. In the treatment of these maladies the cod-liver oil became extensively used, after the commencement of the present century, in the Manchester Infirmary, more particularly by Dr. Bardsley. Subsequently, it was largely employed in Germany ; but, falling into disuse in this country, its restoration to professional and public favour has followed the publication of an excellent treatise upon its virtues by Dr. Bennett of Edinburgh. In the removal of glandular enlargements, connected with the scrofulous constitution, cod-liver oil acts in a way the most remarkable and often speedy. In consumption it has also a very decided beneficial effect. It is prescribed, not for the relief or removal of any particular symptom ; what apparently follows its use is a rapid and unequivocal improvement in all the symptoms. Sir Thomas Watson has very happily expressed the main effect of the remedy, when he says, "It is antagonistic to a much greater degree than any other drug of the consuming power of the disease." We see the beneficial influence of cod-liver oil extended to almost every function and structure of the body : digestion, appetite, strength, flesh, complexion, all

undergo improvement. Strong testimonies have been borne to its efficacy by Dr. Bennett, Sir Thomas Watson, Dr. Walshe, Dr. Williams; and there are probably few medical men who have seen much of this sad disease who would hesitate to concur in the opinion of the last-named eminent London physician, that "cod-liver oil is more beneficial, in the treatment of pulmonary consumption, than any other agent—medicinal, dietetic, or regiminal—that has yet been employed." (For remarks on the different kinds of the oil, its mode and time of administration, see, in Appendix, *Cod-liver Oil*.)

Here it need only further be observed, that, while cod-liver oil is being taken, it is of the greatest importance that the general hygienic means already referred to should not be relaxed: specially should care be taken that all heavy articles of food are avoided, the diet being, as indeed it always should be, plain but nutritious. And still more imperative is it that, if possible, regular exercise in the open air, at all events the inhalation of a pure atmosphere, be practised. It is the neglect of this that often leads to the assumption that the oil has disagreed; or, perhaps, that it will never agree. Let attention also be paid to the condition of the skin. By ablution and gentle friction its function is best maintained.

Notwithstanding, however, a strict attention to all these particulars, cases will occur in which cod-liver oil does undoubtedly not agree; and there are certain articles, one or other of which may, in such circumstances, be substituted for it. Of these, cream, fat of meat (bacon fat), olive oil, almond oil, glycerine,\* are the chief. (See *Glycerine*, in Appendix.)

Various reasons, which need not be particularly referred to here, have been assigned for the beneficial action of cod-

\* A peculiar principle resident in stearin, one of the neutral fatty principles. Glycerine has latterly been much used as a substitute for cod-liver oil; and though in many instances acting most favourably, it nevertheless, like all other substitutes hitherto employed, falls far short of the former. The reader will find an excellent paper on the applications of glycerine in the *Edinburgh Medical Journal* for 1857, by Dr. Lauder Lindsay.

liver oil.\* That it undergoes digestion is undoubted; for when two, three, or four ounces of it are taken daily, and for a lengthened period, there results little, if any, increase in the oily ingredients of the evacuations.

In connection with the subject of the administration of oils, there are many points of great interest, and suggestive of further inquiry. The inhabitants of Iceland, as well as of other northern countries, enjoy a singular immunity from phthisis. Is this in any degree owing to their large consumption of fish oils? A degree of probability is thrown upon this conjecture from the circumstance that, as ascertained chiefly by Sir James Y. Simpson in the course of some investigations, the operatives in certain mills, whose hands are more or less constantly smeared with oil, have apparently suffered a somewhat similar exemption. The fact, moreover, is well known, that among those who are engaged in the bruising and crushing of the olives for the preparation of olive oil, in the vicinity of Florence and other parts of Tuscany, pectoral complaints are much less common than among the community at large.

Of other remedies brief reference may here be made to a few. Phosphate of lime (see in Appendix; also super-phosphate of lime and phosphoric acid) was formerly used in cases of rickets and soft bones, from a fancied inference that

\* Dr. Bennett has pointed out that the proper nutrition and the healthy organization of the body depend, in no small degree, on the maintenance of a due relationship between the oily and albuminous principles which enter into its composition. In certain forms of disease, an excess of the one and a deficiency in the other can be determined, or at least conjectured to exist. In tubercular diseases there is an excess of the albuminous, and a deficiency of the oleaginous principle; and from this Dr. Bennett argues there is the indication for the administration of oils. Dr. Williams suggests, that inasmuch as fixed oils probably do possess a solvent power over the fat of tubercle, cod-liver oil is an oily matter, which in the great majority of instances, the stomach bears easily; which, taken with the food, becomes diffused through the alimentary mass, is readily absorbed by the lacteals, forms a rich "molecular base" in the chyle, apt to saponify with the basic salts of the blood; and when pervading the blood, is capable of penetrating into all textures, and of producing a solvent and softening influence on the solid fats of old deposits. Whatever may be true or doubtful in these ingenious theories, the fact remains, that cod-liver oil is a most important remedy in the treatment of consumption.



it might benefit the bones, which in these diseases are deficient in their earthy constituents. Latterly it has been used in phthisis, in the view that the most desirable chemical change in tubercular deposits which can take place, and which often occurs spontaneously, may be expedited. If calcareous salts be taken into the system in active phthisis, it is conjectured that advancing tubercle will assimilate them, and that, in consequence, a retrograde action will be determined. Phosphate of lime, as well as the other remedies named above, have already been largely used, and not a few physicians have testified to their virtues.—Iodine (see Appendix), the various preparations of which have proved of such signal service in the treatment of many scrofulous affections, has been considered by some physicians to exercise a curative influence in phthisis. Whether this valuable remedy be capable of promoting the solution and removal of tuberculous matter is very doubtful. Dr. Williams, however, states that he has found iodine useful.—Chlorine (see in Appendix) in the form of vapour, like many other remedies now forgotten, was vaunted as a specific in consumption. M. Gannal first suggested this plan, of which the different methods will be found in the Appendix; and M. Cotterau, in an extended experience, confirmed the satisfactory results at which the former arrived. On the other hand, Andral, Bourgeois, Toulmouche, and a committee of the French Institute, pronounced against it. As a palliative agent, chlorine is undoubtedly useful, and is now only employed in that view. Bourgeois mentions an interesting fact in connection with the inhalation of chlorine, that in large washing establishments, where chlorine is much used, phthisis is little known.—Of iron, arsenic, tar, creasote, naphtha, oxygen gas, further mention need not be made here; because, however useful as palliative remedies, and in the treatment of the various complications of consumption, none of them are now recognized as curative means by the profession generally.

It remains to add a few observations regarding the palliative treatment of consumption:—

Bleeding may be, but is very seldom, necessary; and



when so, it is local blood-letting alone that is required. Cupping, or the application of a few leeches, may be demanded in the treatment of the intermittent inflammations and congestions which occur in the course of the disease. A pleuritic stitch in the side, causing great uneasiness and wholly preventing repose, may resist all other means, including hot fomentations, mustard and turpentine applications, dry cupping (see Appendix)—these, however, should be always had recourse to in the first instance—but yield to the application of two or three leeches (see *Leeches*, in Appendix). In nearly similar circumstances, blisters, liniments (as croton oil), are sometimes useful. Such, however, have no real influence on the progress of tubercular deposits; while, by increasing febrile disturbance, they often appear to aggravate the evil. They should not be employed when any decided febrile disturbance exists. Still, there are facts which tend to show that the existence of a condition somewhat analogous to counter-irritation may retard the progress of tubercular disease in the lungs. Fistula in ano (briefly described under that head, see p. 122) is often connected with pulmonary disease, the advance of which it does seem, in some instances, to retard; and so frequently has the more serious disease appeared to be aggravated on the decline of the discharge from the bowel, that, in such cases, unless the fistula be very troublesome, it is considered a safe rule not to interfere by the performance of the simple operation necessary for its removal.

In now drawing this long article to a close, a brief reference will be made to the means of treatment for the individual symptoms and complications usually found most efficacious:—

In the endeavour to relieve the cough of phthisis, which often proves severe, causing much pain, preventing sleep, and (what must always be attended to when possible) perhaps preventing other patients sleeping, no remedy is superior to opium. With consumptive patients it seldom disagrees. For this purpose one or other of the preparations of opium may be employed. The dose, in the first instance,

need not be otherwise than small. A few drops (5 to 15) of the solution of the muriate or acetate of morphia, alone or combined with an equal amount of antimonial wine, 3 or 5 grains of the compound ipecacuanha powder (Dover's powder), given at intervals, three or four times in the day, often do good. Other suitable preparations of opium are the paregorics, Scotch and English (see Appendix). Dr. Prout speaks highly of the aniseed (an ingredient in the paregorics of both countries) in affording relief to the cough: the oil of aniseed (*oleum anisi*) may be given in doses of 5 to 10 drops in water. Of other remedies, hydrocyanic acid (prussic acid) may be mentioned (see Appendix); also a nostrum, chlorodyne. When these means fail, the application of a leech or two leeches over the upper part of the breast-bone may succeed in removing the cough; but if the patient be weak, this expedient must not be had recourse to.

When there is much difficulty of breathing, a degree of relief may sometimes be obtained by the administration of a few drops of chloroform (5) or chloric ether (10 to 15), or from the very cautious inhalation of a small quantity of the former.

When the expectoration is very difficult, giving rise to urgent and distressing cough, its greater freedom may be encouraged by the use of a little antimony, ipecacuanha, or squill (see Appendix). On the other hand, the expectoration may be excessive, wearing out the patient's strength, and requiring to be controlled: in such circumstances, opiates may be given, or acetate of lead, in doses of 2 to 5 grains; or of gallic acid, 3 to 5 grains, alone or with opium; also naphtha. (Under these different heads, see Appendix.)

For the relief of the perspiration, oftentimes so distressing to the patient, no remedy is more effectual than the sponging of the body with vinegar and cold or tepid water. This expedient should be practised twice daily, morning and evening; and if the patient be weak, a nurse or attendant should undertake the duty. While this is not to be neglected, it may be necessary to administer some astringent medicine: and for this purpose there is the diluted sulphuric acid, in

doses of 15 to 25 drops, thrice daily, in water ; or the powder of kino, in doses of 10 to 15 grains, along with some mucilage. In the colliquative perspiration of the more advanced stages of phthisis, the tincture of the muriate of iron, in doses of 20 to 30 drops, thrice daily, is often serviceable.

Diarrhœa may be connected with simple disorder of the bowels, or may depend on the existence of tubercular deposits and ulceration in their course ; and for these conditions a different treatment is required. They may be readily distinguished : for the former will be occasional or accidental in its occurrence ; the latter, while more apt to occur during the advanced periods of the disease, will also be much more lasting in its duration. For the former, a small dose of laxative medicine (castor-oil) is the appropriate remedy ; but when the diarrhœa depends on the latter condition, recourse must be had to astringent remedies. An opiate injection, consisting of fine starch dissolved in a small quantity of water, with a small teaspoonful of laudanum added ; or a morphia suppository, containing  $\frac{1}{4}$  or  $\frac{1}{2}$  grain of muriate of morphia (see Appendix) : if they do not avail to check the flux, they seldom fail to relieve the great irritation with which it is accompanied. Great care, in such circumstances, must be used that no indigestible article of food is taken, or anything calculated to increase the disorder of the bowels. Regarding medicines which may be prescribed, remarks will be found in the Appendix, under the heads of *Chalk-mixture*, *Kino*, *Bismuth*, *Acetate of Lead*, *Sulphate of Copper*, *Logwood*, besides *Opium* and others already named.

In endeavouring to allay the vomiting which occurs in the course of phthisis, as it often depends on the severity of the cough, being apparently excited by it, whatever tends to alleviate the latter will produce a good effect. When due to irritation of the stomach otherwise induced, ice is often efficacious. Bismuth, naphtha, creasote, hydrocyanic acid, are all good remedies. When affected by vomiting, the patient should occupy the completely recumbent posture ; and in such circumstances the application of a mustard poultice over the stomach should also be tried.



When there exists irritation of the throat, and when there is reason to believe that tubercular deposition has taken place in the upper part of the air-passages (larynx and trachea), some relief may be obtained from the inhalation of steam, or of a very weak chlorine vapour. When so affected, the application of a weak solution of caustic (nitrate of silver) may also be practised.

When bleeding from the lungs has occurred—and more particularly if the amount of blood passing is considerable—there are certain simple but important rules to observe. Let the patient's head be kept high; in other words, favour the occurrence of a feeling of faintness, which often leads to the arrestment of hemorrhage. Let the air about the patient be kept cool; open a window in the room if the weather be mild; let the clothes upon him be light; let there be perfect quietness and silence. Cold should be cautiously applied over the chest; a piece of ice placed in the mouth; the limbs kept warm. If the action of the heart be excited, a little ipecacuanha or antimony, so as to induce nausea, should be administered. The administration of a cooling laxative is also called for. If the hemorrhage have been so profuse as to bring life immediately into jeopardy, or if it have occurred in the case of a patient already greatly reduced, then such remedies as those now mentioned are wholly inadmissible. Astringents must be given. Acetate of lead (3 or 4 grains) in solution, with a little acetic acid and laudanum, may be given every half hour; or gallic acid, in similar doses, to the extent of 30 grains in twelve hours. The most efficacious remedy which we at present possess for controlling hemorrhage is ergotine, which is best used in doses of 3 to 5 grains injected under the skin, or, better, into the substance of a muscle. Stimulants, moreover, may be required: they are best administered cold. Digitalis is sometimes found useful. Half a teaspoonful of common salt may be given to the patient if no other remedy is at hand, and repeated at intervals of half an hour till other means are procured.

Under certain other divisions, the treatment of some of the special symptoms and complications of phthisis will be found.



**CONVULSIONS.** These are rapidly alternating contractions and relaxations of the muscles, causing movements, often violent in degree, of the limbs; and usually, when thus marked, accompanied by the condition of unconsciousness. Phenomena of this nature occur as symptoms in the progress of many cerebral and general or blood diseases; while several peculiar nervous affections, yet to be described, as Epilepsy and Hysteria, are essentially convulsive disorders. Independently of these, however, convulsions are frequently met with when they do not form an essential part of a disease, as in the instances already referred to; but, though often determined by the existence of some irritation in the mouth, bowels, or other parts of the body, they are nevertheless the main object to which the attention of friends as well as of the physician is called. Under such circumstances we speak of convulsions as if constituting a disease.

It is in early life—childhood, but particularly in infancy—that convulsions are chiefly met with. Dr. West—an excellent writer on the diseases of infancy and childhood—points out why convulsions are so much more frequent in early life. In the young child the brain is but imperfectly developed; in the adult there exists the regulating and controlling power of the great central organ of the nervous system. In proportion as the size of the brain increases, and its structure acquires perfection, and its higher functions become displayed, convulsions grow less and less common. During the first year of existence they are computed to occasion 73·3 per cent. of all deaths which take place from diseases of the nervous system. In the next two years, during which the weight of the brain is more than doubled, convulsions are just one-third as common. From the tenth to the fifteenth year they cause less than 3 per cent., and above fifteen less than 1 per cent., of the deaths from diseases of the nervous system. The peculiar condition of the nervous system in the child is to be regarded, then, as a powerful cause of infantile convulsions.

A great variety as regards the susceptibility of different children exists. In some families, for example, convulsions

are unknown; while in others the mother has had to nurse each member of her family in them.

All causes which tend to diminish the general health—such as impure air, a badly-regulated, unwholesome, and insufficient diet—may operate in determining a tendency to this disorder. The immediate causes of convulsions in children are numerous; and the discovery of the particular one in operation comes in each case to be a matter of the highest importance. Irritation existing in some part of the body, and transmitted through the medium of the nervous system to the brain, is a fruitful source: of this nature is the process of teething, which is often difficult. Irritation in the bowels—whether from the presence of worms, or of indigestible articles of food, or unhealthy secretions—acts in the same manner. Various other causes might be stated; those which have been mentioned are certainly the chief.

It must always be held in remembrance, that in every case of convulsions occurring in a child, the first duty is to determine what is the condition of the mouth, and what the state of the stomach and bowels. When a child previously in perfect health, and known not to be suffering from teething, and not to have recently taken any indigestible article of food, becomes affected with convulsions, the suspicion may reasonably be entertained that an attack of one of the eruptive fevers is impending; and if the patient have been lately exposed to the contagious influence of one or other of these—and more particularly measles, scarlet fever, and smallpox—then the suspicion may amount to a probability that the morbid agency of one or other of these is at work.

If the child have been narrowly watched, it will generally be found that, before the attack of convulsions has come on, there have been indications, important in themselves, of its approach. The imperfectly closed eyelids during sleep—the twitchings of the face—sudden startings, with moaning or screams,—these are among the signs that a more serious deviation from the condition of health is about to present itself. When the fit comes, usually the convulsive movements are seen to commence in the face: these are much

more decided twitchings than those formerly noticed ; and in a few seconds the head and neck are drawn backwards, and the limbs, upper and lower—perhaps on one side of the body only, often on both—are bent and stretched out. The child is now observed to be unconscious : it experiences no pain ; and the freedom from suffering may be urged as some small ground for consolation to the mother or other anxious spectators. The eye is fixed, with a contracted or dilated pupil, alike immovable : there is no sight ; the finger or a light may be brought near it without occasioning any winking. And as there is no vision, neither is there hearing ; the loudest sound will not startle. The surface of the body is warm, and a copious perspiration soon breaks out ; the pulse is frequent and feeble ; the act of breathing is much hurried. Very often during the fit the bowels are moved ; water also passes from the bladder, and sometimes vomiting occurs.

The duration of the condition now described varies very considerably : it may last only a minute ; or, on the other hand, with but slightly marked intermissions, may continue hours, or even days. The average duration of an attack of infantile convulsions may be stated at from five to twenty minutes. When the paroxysm subsides, usually the child falls into a deep sleep, or, opening its eyes, and apparently bewildered, it utters loud screams or bursts into a fit of crying. Convulsions may terminate fatally ; when uncomplicated, independent of any particular disease, this, however, is undoubtedly a rare event.

In the treatment of infantile convulsions, it is proper to consider what may do good in the attack, and what may be required after it has subsided, and in order to prevent its recurrence. As regards the former, there are certain general rules of universal application which may be followed. Let the little patient, if possible, be placed in circumstances where a pure and not heated atmosphere may be breathed ; let all articles of dress in any degree tight be either loosened or removed. Let cold be applied to the head, warmth to the feet and legs. The child may be put in a warm bath, while



pieces of linen dipped in cold water are placed over the head. While these measures are being adopted, the inquiry as to the cause on which the convulsions depend should not be delayed. If the gums are found to be swollen, and if so then certainly painful, they should be freely lanced. This operation is best effected during the interval of the paroxysms; but it may be necessary, owing to the violence of the convulsions and their long continuance, to perform it while they last. If some indigestible article of food has been taken, and still exists in the stomach, acting as an irritating cause, it is of consequence to get rid of it. For this purpose an emetic dose of the wine of ipecacuanha should be administered; but if the convulsion lasts, or the patient cannot be sufficiently roused from the deep sleep which has followed its declension so as to swallow the emetic, then the tickling of the back part of the mouth by means of a feather will produce the desired effect. These are the simplest remedies available in such circumstances; and, fortunately, in the great majority of instances they suffice. If, however, as sometimes happens, the convulsions continue, other means may be adopted: friction along the spine, either with the hand while the patient is in the bath or removed from it, with an anodyne liniment (see Appendix); mustard poultices may be applied for a minute or two at a time to the legs and feet. If the face be much flushed, the veins in the neck full, and the pulse strong, then a little blood may be taken by means of one or two leeches applied to the temples, or, better still, to the inner ankles, as the foot can be steadied without difficulty even during a violent convulsion. A purgative injection should also be administered. When the seizure proves a very severe one, resisting the ordinary remedies, recourse may be had to the cautious exhibition of chloroform by inhalation. Cases which apparently recovered owing to this valuable remedy, are now on record; and Sir James Simpson has shown how, for many hours, its soothing action may be maintained, and with the best possible results.

When the attack has happily passed off, the greatest attention must be paid to the state of the general health of



the patient; and very specially must care be taken that no cause of irritation, as in the condition of the gums or bowels, be permitted to continue or return. If the convulsive affection be found to have been developed upon the decline of a cutaneous eruption, as sometimes happens, the application of some irritating ointment or liniment (see Appendix), or a blister, to some part of the surface, will be advisable. For a considerable period very great attention should be paid to the diet. If the case be that of a very young child still at the breast, let it be thoroughly determined that the milk he receives agrees with him. "A cause of convulsions perhaps not sufficiently appreciated," remarks Dr. Wood of Philadelphia in his *Treatise on the Practice of Medicine* (vol. ii.), "is the milk of the mother or nurse." If the child have been already weaned, then both as regards quantity and quality of the food there is room for much circumspection. Let the bowels also be carefully regulated, small doses of laxative, specially of alterative medicines (as the gray powder), may be given from time to time. Let opportunity be taken also to brace the child as much as possible: sponging with salt water, cold or tepid according to the season, and rubbing along the course of the spine, and down the limbs, are means the most conducive to this end.

**COUGH** is the peculiar sound produced by the sudden forcible passage of the air from the lungs through the wind-pipe. The action is determined by a specific nervous impression; a sensation of tickling or other irritation is experienced in some part of the air-passages; this is communicated to the brain, from which again that motor influence which is required for the production of a cough is transmitted to the muscles concerned in expiration,—the object to be attained by the cough being the removal of some irritating cause.

There are several varieties of cough. A most singular form will be described under the head of *Hooping-cough*, p. 139; but, besides this, it is customary to distinguish between cough attended by expectoration and that variety which no expectoration accompanies; the former is styled a moist, the

latter a dry cough. Again, cough may be only accidental or occasional, or it may be frequent or even incessant; it may occur too in severe paroxysms or fits.

In most affections of the chest, whether of the lungs or heart, cough is present as a symptom, and, when so, demands the most careful attention; but its occurrence is not limited to diseases in that part of the body: there are peculiar conditions of the nervous system, and of the system generally, as in gouty and rheumatic persons, which determine it; and there is a cough connected with derangement of the stomach and bowels, and also of the liver.

It is unnecessary to dwell upon the occurrence or treatment of the cough which accompanies affections of the chest, including that which arises from exposure to cold or damp, and depends upon inflammatory action, more or less marked in different parts of the air-passages, for such either has been already or will be alluded to under different heads. In the great majority of instances there will be no great difficulty in distinguishing, by their characteristic sounds, the coughs which accompany the various affections which have been referred to; and by no very competent observer will the violent barking, sometimes brassy cough of a nervous subject, be mistaken for the short dry cough, or the fuller, well-formed cough, accompanied by expectoration, which mark the stages of pectoral complaints.

When cough arises from derangement of the stomach, liver, or bowels, there will always be present some of the more ordinary symptoms of such affections; and the treatment to be pursued will depend upon the particular organ which suffers. When the patient is of the gouty or rheumatic habit, his cough will probably be relieved by whatever tends to rectify a disordered condition of the stomach and bowels, and to remove from the system the hidden poison which is the cause of his manifold symptoms (see under *Gout*, p. 127, and *Rheumatism*, p. 183). The nervous cough will be most readily subdued by those means which tend to quiet or remove irritation of the nervous system generally: in such cases, and usually they occur in young females,

attention must be paid both to the condition of stomach and bowels, and to the menstrual function; irregularity of one kind or another in the last is very likely to be its cause. When the cough is violent and incessant, uncomfortable to the patient, and very distressing to relatives and friends, by reason of its loud and disagreeable sound, relief may be afforded by one or other of those remedies whose soothing or calmative action is well known. For this purpose camphor, in the form of camphor julep, may be given. More powerful and effectual remedies, however, are opium and hydrocyanic acid; 10 to 25 drops, according to the age of the patient, of the solution of the muriate of morphia, in a little water or glycerine; or 1 to 3 drops of diluted hydrocyanic acid, in a little compound tincture of cardamoms, may be administered two or three times during the course of the day, selecting those times when the cough is either most likely to come on, or to prove most intractable.

A very annoying form of cough is often kept up for a long time by a relaxed state of the throat, more particularly by an elongated condition of the uvula; and what is of importance to remember in connection with this is, that the sufferer may never have imagined that the throat was the part really affected, but, as has happened more than once in the experience of the author, looked upon the lungs as the cause of the lasting and unpleasant symptom. In such circumstances, a careful inspection of the throat is required. Very often the uvula, when much lengthened and enlarged, besides hanging down and tickling the upper part of the air-passages, and so producing the cough, causes considerable difficulty of breathing, more particularly occurring when the recumbent posture is assumed, owing to the spasmodic action in the same part which it induces. This troublesome affection is to be remedied by the shortening of the uvula, either, and most effectually, by removing a portion with the scissors or knife, an operation attended by no danger, and the smallest amount of pain; or by the application, at short intervals, of a strong solution of nitrate of silver to the part. The latter plan often fails, necessitating a recourse to the former.



**CRAMP** is the spasmodic and involuntary contraction of a muscle or muscles, attended by rigidity and much pain, and usually lasting for a brief period. Cramp may be a mere symptom in connection with the presence of a specific and well-marked complaint,—as, for example, the cramps of the limbs already mentioned in cholera; but, as is well known to many sufferers, this painful affection frequently occurs in an independent form, apparently unconnected with any morbid condition, though in all probability derangement of the stomach and bowels, or of the blood, as in the gouty, who suffer much from cramp, is the determining cause.

Cramp may be seated either in those muscles which are under the control of the will, the voluntary muscles; or in those whose action is independent of volition, the involuntary muscles. Of the former variety is the severe pain experienced in the calves of the legs, the feet, the neck, and the hands and fingers; of the latter, the pain, very similar in its nature, which attacks the stomach and bowels (cramp affecting the stomach will be described under the head of *Indigestion*, p. 147; when seated in the bowels, it has been already noticed under that of *Colic*, p. 38).

What is ordinarily known as cramp is the spasmodic affection of the voluntary muscles in those parts of the body already named. The attack is usually sudden, and not unfrequently occurs by night, the patient in bed being awakened by it from sleep. During its continuance, the muscular fibres are gathered up into a hard knot, which is always easily felt by touch, and oftentimes may be seen. The pain attending the spasmodic seizure is very severe; sometimes it is altogether agonizing, and loud screams are involuntarily uttered by the sufferer. There are instances in which, owing to the severity of the pain, fainting has taken place. Cramp usually lasts only for a few moments; it may, however, continue for minutes, and even hours. A sudden cessation of the spasm may occur, or a more gradual relaxation of the muscular fibres ensue; in either case, if the attack have been severe, there results for a time a feeling of soreness, always increased by touch, and frequently an inability



fully to exercise the affected limb or other part. The spasm may be concentrated in one muscle, or it may extend itself to another in the neighbourhood, or even pass from one limb to another, or from a limb to the neck or side.

There are certain persons who manifest a remarkable tendency to be affected by cramp; the movement of particular muscles,—as, for example, in the attempt to cross the legs,—being almost surely followed by it. Again, there are bathers and swimmers who suffer from cramp when in the water; and perhaps a more dangerous position to be placed in cannot be imagined than that of the swimmer who, when beyond his depth, is suddenly seized with spasm in the muscles of the limbs or sides. Presence of mind in such circumstances is soon lost, and fatal accidents have thus not unfrequently occurred. He who is subject to attacks of cramp should cease to be a bather or swimmer.

If careful inquiry be made, it will generally be found that the attack of cramp, particularly when it occurs in the occasional sufferer from it, is connected more or less intimately with a disordered condition of the stomach or bowels. There are some who almost invariably suffer from cramp during the night after any marked indiscretion in diet committed during the day. Persons subject to gout and rheumatism are peculiarly liable to cramp.

In this view there is a preventive treatment of cramp, embracing due care in regard to diet, and the proper regulation of the stomach and bowels. When irregularity of the bowels, along with derangement of the digestive function, exist, small doses of rhubarb with bi-carbonate of soda or potash (8 or 10 grains of the former, 12 or 15 of the latter) may be taken for a short time daily with advantage. Dr. Wood of Philadelphia suggests sulphur as a good alterative in cases where the employment of no other remedy is indicated. Dr. S. A. Bardsley succeeded, in his own case, in preventing the nightly attacks to which he had long been subject by a very simple expedient,—that of sleeping on an inclined plane, the foot of the bed being twelve inches lower than the head.

When a part of the body is suddenly affected with cramp, let it be firmly grasped, and diligently rubbed with the hand. When the spasm is seated in a limb, the extension of the contracted muscle will generally serve to undo it; when in a lower limb, jumping from the bed to the floor and making the attempt to walk is often a successful means of removing the attack. If, instead of disappearing speedily, the cramp shows a tendency to continue, then immersion of the affected part in hot water, and friction with an anodyne embrocation (as Dr. Bow's, or the soap and opium, or chloroform liniment, or with plain laudanum) must be had recourse to.

**CROUP.** This word, which is Scotch, means to croak or cry with a hoarse voice; and the disease now to be described is, in all probability, so named on account of the peculiar noise which the child suffering from it makes in breathing.\* The first appearance of the word in medical literature was in a letter addressed by Dr. Patrick Blair to the distinguished English physician, Dr. Mead, dated Coupar of Angus, July 6, 1713, in which the writer speaks of "a certain distemper with us, called the Croops."† It is to the great Napoleon that we are indirectly indebted for no small amount of the information we now possess regarding croup. The young Napoleon, son of the Emperor's brother Louis, and grandson of the Empress Josephine, died in 1807, while his father was king of Holland, and he its crown prince, of this disease, to the poignant regret of all his relatives, and of none more so than Napoleon himself. Croup, neither in its pathological bearings nor as regards its treatment, was then at all well understood; and, writhing under the affliction he had sustained, the Emperor, from his camp of Finkenstein, where he then was, ordered a report from the Faculty of Medicine of Paris concerning the disease, and offered a prize of high value for the best essay on the

\* Dr. Jamieson's *Dictionary of the Scottish Language*.

† See a very valuable article on Croup in the *Edinburgh Medical Journal* for February 1856, by Dr. Charles Wilson.

subject. In obedience to the imperial decree, the Faculty reported, and no fewer than eighty-three papers, in competition for the prize, were given in: that was divided, there being two authors whose essays were of singular merit,—Jurine, who wrote in German; and Albers, also a German, but who wrote in Latin. The essays of M. Vieusseux, M. Caillou, and M. Double, were considered entitled to very honourable mention. All these, and many of the unsuccessful efforts, including those of German, French, English, and American authors, afterwards saw the light of day. Though there are many synonyms for this disease, the word Croup has been adopted into the medical literature of all languages—a compliment to Scotland and the Scotch.

The approach of croup is generally gradual, though at times the symptoms which indicate the undoubted accession of the disease are suddenly developed. In the former and usual case, the earliest symptoms to attract notice beyond a general feverishness or fretfulness of the child, which may have been altogether unaccountable, are some peculiarity in the voice, a degree of harshness which is unusual, perhaps of hoarseness, this accompanied by a short cough, but unattended by expectoration. If the symptoms have occurred for the first time during the day, or while the child is awake, he will now, if sufficiently old, complain of pain; if they have manifested themselves during sleep, or in a very young child (a mere infant), its little hand may often be observed raised to its throat—an indication of suffering that probably is. A little time, varying in duration, elapses, and, at its close, an alteration is effected; the case is changed into one of anxiety and danger, and the symptoms now present are those which mark the existence of the formidable affection known as croup. The poor child partakes of the alarm which its condition never fails to excite in the bystanders. Its countenance clearly indicates suffering: its face is red and flushed, the veins in the head and neck distended; the voice and cry are equally shrill, and the cough, as that great master of description Cullen has termed it, clanging. The breathing is, meantime, becoming more and



more difficult and laboured; like the cough, and cry, and voice, it has acquired a peculiar noise; the noise is loud, sonorous, and may be heard at a considerable distance, as long, at least, as the little patient's strength lasts or keeps tolerably entire;—this is the croupy breathing. Though at the commencement of the disease the cough has been quite dry, unattended by expectoration of any kind, after a time (and this is one of the chief peculiarities of the affection) something is coughed or hawked up, but that something differs from ordinary mucous expectoration, such as is met with in catarrhal affections,—at first perhaps tough and viscid, it soon presents the appearance of small shreds of membrane, of a whitish colour. While these are being coughed up and brought into the mouth, the difficulty of breathing is much aggravated; and, undoubtedly, this expectoration, though, as will immediately be seen, eminently desirable, is, on account of the threatening suffocation it causes, a source of greatly increased danger. With all this embarrassment to the breathing, there is no real difficulty in swallowing; the patient will generally take and swallow easily enough, at the proper moment, any fluid which may be offered. In connection with these the local symptoms, there is always some amount, and it is speedily developed, of inflammatory fever; to the existence of this, the flushed face, already noticed, a hot and at times pungent skin, and a rapid pulse with thirst, bear witness.

If, under these circumstances, no amelioration in the symptoms occurs, a fatal termination by suffocation is to be apprehended, and probably that may take place suddenly, and usually not later than the second or third day from the commencement of the malady. But that immediate danger averted, safety for the child does not necessarily follow. The little patient, relieved from impending suffocation, may again draw breath so freely as to be cheerful and apparently greatly relieved, when suddenly, it may be even after a few days have passed, a violent paroxysm of difficult breathing seizes him; and this time more certainly, but in the same manner as before threatened, suffocated, he dies.



The question is often asked, "Has croup any special or marked premonitory symptoms?" On this point it may be stated that the invasion of the disease differs to a considerable extent in different cases. Without the occurrence of any symptoms which have directed attention to the child's condition, the disease has often been, and may be, developed. Dr. West of London considers that the sudden attacks of croup, unprecedented by any premonition, are chiefly seen among healthy children living in the country. A very sudden and violent onset is, however, the exception, and not the rule; it more frequently happens that, for several hours, and perhaps for a day or two, the child has manifested those symptoms of indisposition which have been already referred to.

Croup is essentially a disease of childhood. "All the world knows," writes M. Double, "that the age at which children are most frequently attacked with croup commences at the period of weaning, and continues till puberty is reached." But while the terms of life now mentioned do include that season in which the disease is most common, and a still more restricted period may be stated, it must be borne in mind that croup has occurred, and therefore may again occur, during the time of nursing; that it has been observed, and therefore may again be observed, after puberty, and indeed during adult as well as senile life. M. Bretonneau gives the case of a child, a fortnight old, feeble and small, who died of well-marked croup; and again, that of a woman, aged fifty-five, who was similarly affected. M. Louis gives eight cases of croup observed in the adult. From these, as well as many other facts which need not be referred to, croup must be considered as a disease which may occur at all ages; but while this remark undoubtedly holds true, it again must be qualified by the knowledge acquired from a very extended experience of the disease in all countries, and by numerous observers, that the period of life for the maximum occurrence of croup is between the second and seventh year.

More male than female children are attacked by croup;

a fact which cannot be satisfactorily explained, but is nevertheless undoubted. Of 249 cases that came under the observation of Gölis at Vienna, 144 occurred in males, 105 in females; of 29 cases recorded by Dr. West, 18 were males and 11 females; Jurine's experience at Geneva was 54 males and 39 females.

There are certain families the members of which are more subject to croup than others. Dr. Wood of Philadelphia speaks of the disease as running in families. All the children of certain parents suffer from it, while those of others escape. Haase mentions the death of four children, the offspring of one mother, within six weeks, from this disease; and there are probably few persons who, within the circle of their own acquaintance, have not heard of a similar though not so harrowing a domestic calamity.

The occurrence of croup is, to a very considerable extent, influenced by climate and locality. Certain climates and localities there are which, to all appearance, favour its origination. It is more common in northern than in southern countries,—even in the north of England it prevails more than in the south. Dr. Alison considers croup to be generally produced by a combination of cold with moisture; hence it is observed to be remarkably more frequent in low moist situations than in higher grounds, and in wet weather than in cold. Dr. Home, one of the earliest writers to give a detailed account of the disease, found croup common in the towns adjoining Edinburgh, on the coast, especially Leith and Musselburgh. Dr. Alison has made the same remark; and he has been still more precise in indicating the Cowgate, a low-lying, and Canal Street, a damp situation, as those in which the greater number of cases of croup occur.

Croup may occur in an epidemic form. The most remarkable epidemic occurrence of croup in recent times happened in the years 1805–6–7, when the disease spread over the greater part of central Europe. It was during its prevalence at that time that the Crown Prince of Holland, as already mentioned, was attacked and died. Again, like other epidemic

diseases, it has been noticed in regard to croup, that a sudden and remarkable increase in its occurrence, and also in its severity, has at different times taken place. It has never extended over Europe in the same manner as towards the commencement of the present century ; nor has the mortality, since that time, been at all proportionate to what it was then : but in London it increased very greatly in 1841-42 ; and in Paris, in 1840, twice as many deaths were occasioned by croup as during 1838. Croup is not a contagious disease ; such, at least, is the opinion usually entertained by physicians.

Croup is essentially an acute disease ; its progress is always more or less rapid, never slow. It is very important to hold in remembrance, that during the march of the disease there are frequent occurrences of exacerbation, when all the symptoms become more aggravated ; particularly, however, the difficulty of respiration, and noisy breathing. To these paroxysms, as they are usually named, the French apply the term *accès*. They may occur during the day, but are specially prone to come on during the evening or at night. In eleven cases noted by M. Valleix, a distinguished French physician, ten were accompanied by the paroxysms at night. "Throughout the whole course of the disease," remarks Dr. West, "an obvious tendency exists to the occurrence of nocturnal exacerbations, and to remissions as morning approaches."

The duration of croup may be stated at from three to twelve days, but usually the disease will be found to run its course in from four to six days. Dr. Craigie observes that croup is never protracted beyond the eleventh day, affirming that before then the case has either terminated fatally, or an amelioration in the symptoms, the prelude to complete recovery, has occurred.

The fatal termination of cases of croup is either by insensibility or by suffocation. In both of these the function of breathing is involved. In the former case the death is comparatively slow : the imperfect changes produced in the blood at the lungs tell gradually on the great nervous centre, the



brain, and the child thus affected passes into a state of drowsy torpor, from which, after a time, the successive paroxysms of difficult and noisy breathing fail to rouse him; shortly he becomes altogether insensible to everything that is taking place around him: in this state he dies. An easy death it is, freed from suffering; for though there may be, at the close, an apparent struggle, it is only in appearance,—insensibility to pain has generally, by some little time, preceded the last long deep breath. The second mode of death in croup is quicker, more agonizing to the sufferer, more painful to the sight of bystanders: the child perishes miserably by suffocation; its last minutes are spent in an uneasy, often violent, struggle and gasping for breath.

The symptoms and fatal termination in cases of the disease which has now been briefly described, are explained by the occurrence of inflammatory action in the upper part of the air passages (larynx and trachea). But in croup the inflammation is of a peculiar character, being attended by the formation of what is called a false or adventitious membrane; which membrane, in the first instance closely adherent to the mucous surface of the larynx and trachea, in some cases extends upwards, so as to be visible in the back part of the mouth; and in others passes downwards, not only to the larger divisions of the bronchial tubes in the lungs, but is also found penetrating into the minute canals, and forming a cast of their ultimate ramifications. It is the presence of this false membrane directly obstructing the entrance of air to the lungs, in combination with the spasmodic affection of the upper part of the air-passages (which enters, more or less, as an element into all cases of inflammatory croup), that gives its serious, and, indeed, generally speaking, dangerous character to the disease.

A few observations will now be made on the management of croup:—Every case of this disease requires treatment the most active, efficient, and energetic. In cases where an attack is merely apprehended, in which such symptoms as feverishness, a dry with perhaps slightly ringing cough exist, care should be taken that the child so affected is watched



night and day. For the relief of such symptoms, the warm bath (see in Appendix, *Warm Bath*), confinement to bed, at all events to one room, and spare diet, should be ordered. In such circumstances the employment of an emetic, the wine of ipecacuanha, or antimony (for a very young child, the former), often brings relief. Ten or fifteen drops of the wine may be given with a little warm water every ten minutes till vomiting occurs; this effect being produced, it may be well, by smaller and less frequently repeated doses, to keep up for a short time the nauseating action of the ipecacuanha or antimony; while a little saline medicine (bicarbonate of soda or potash) is given to act upon the bowels. It is very necessary to attend to the regulation of the temperature of the room occupied by the child: it should be both warm and moist,—not lower than sixty-five degrees Fahrenheit. To convey some moisture into the air of the apartment, the steam from a boiler or kettle on the fire may be directed through a simple roll of paper. Care must also be taken that there is no draught of cold or cool air. By attention to these simple instructions attacks of croup may be warded off; and their application is specially important in the case of children who have either previously suffered from the disease or belong to a family the members of which are subject to it.

There are a few other points to which it is of great consequence to attend in the treatment of croup, as well as of threatened croup:—1. See that, for the purpose of enabling the breathing to be as free as possible, the little patient is placed with the head a little higher than the body. 2. Let there be no external circumstances tending to obstruct the breathing, no pressure of the bed-clothes on the chest or neck. 3. Let the child drink freely of bland fluids (water, milk, toast and water, barley-water); this for two reasons,—to prevent the throat getting dry, and to supply the fluids of the system which are deficient.

If the disease sets in violently, more energetic remedies must be used, and that promptly. The principal remedies are two in number, bleeding and antimony. When a case

of croup is seen early, while the child's strength is good, most physicians are agreed that the abstraction of blood, either from the external jugular vein in the neck, or by means of leeches placed over the upper part of the breast-bone, is the most suitable remedy. Dr. Cheyne directs one ounce of blood to be taken from a child of from 1 to 2 years; six ounces from a child of from 8 to 10; from those of intermediate ages in proportion. But whether recourse is had to bleeding or not, the sooner the child, in such circumstances, is brought under the influence of antimony the better. One-eighth or one-sixth of a grain of tartar emetic, dissolved in hot water, should be administered every few minutes till vomiting occurs. Of 53 cases of croup treated with emetic doses of antimony by M. Valleix, 31 recovered; of 22 cases treated less actively, only 1 recovered. Mercury, in the form of calomel, has often been used in the treatment of croup, and undoubtedly at times with good effect; the chief objection to its employment is that its operation is too slow. The child affected with violent croup should be placed for several minutes in the hot bath; and, after removal from it, a sponge dipped in hot water should be closely applied to the neck, the application being renewed from time to time as the sponge cools. The late Dr. Graves, a distinguished Dublin physician, bore a high testimony to the value of the hot sponge.

If the disease has advanced to a further stage, and there exists prostration to any extent, then such remedies as those now mentioned, which are depressing, must be considered as inadmissible; and while it is, in such circumstances, still desirable to produce vomiting, that must be accomplished, not by the exhibition of antimony or ipecacuanha, but by sulphate of copper, of which one-fourth to half a grain may be given in water every ten minutes till vomiting occurs.

When an appearance of sinking is visible, stimulants, wine, and strong beef-tea, must be administered: and while all such cases must be regarded as fraught with danger, there is yet often room for hope; for even in circumstances apparently the most desperate, and when medical appliances

have been abandoned, a sudden improvement has taken place, a portion of the false membrane obstructing the air-passages expectorated, and ultimate recovery occurred.

It is unnecessary here to refer particularly to the treatment of croup by what are called topical applications. Of these a solution of caustic (nitrate of silver) is the chief. This plan has latterly been pursued by Dr. Horace Green of New York, who is favourably impressed with its efficacy. A further expedient resorted to in cases of croup, is the operation of tracheotomy, or cutting into the trachea. This has been, and indeed still is, frequently performed in France. Two able French physicians in particular, MM. Trousseau and Gersant, have borne testimony to its value; but, in order to be efficacious, the operation must be had recourse to at a comparatively early period of the disease, before the formation of the false membrane alluded to, at least in the trachea; and in itself there is, at all events, some degree of danger. The judicious physician will weigh well the circumstances in every particular case, before he counsels the performance of the operation; but with the amount of evidence in its favour, he will feel it in a large proportion of cases his duty to give the patient the chance of recovery which the operation affords.

**DEAFNESS**, the partial or complete loss of the sense of hearing, may depend on very various conditions. It may result from disease of the brain, or be determined by such causes as interfere, to a greater or less extent, with the nerve of hearing. Again, as in a large number of cases, the affection is a functional one, depending on the stoppage of the external passage or meatus; or deafness may be caused by inflammatory action in the ear. There are, besides, many persons, chiefly those who are advanced in life, who suffer more or less from deafness, sometimes produced by an extremely dry condition of the external passages, tympanum or drum of the ear, and its membrane; in other instances, dependent on various pathological conditions.

When, upon carefully examining the ear of a person suf-



fering from deafness, the meatus is seen to be occupied, to a greater or less extent, with wax, the natural secretion, it may reasonably be conjectured that the impaired hearing depends upon the obstruction thus offered to the entrance of sound; and, in such circumstances, the cautious employment of the syringe will, in all probability, remove the troublesome affection. For this purpose a little warm water is to be repeatedly but gently thrown into the organ, until a mass—oftentimes it proves a very large one—is expelled. Generally both ears, in persons so affected, require the use of the syringe. In some cases the wax is of a very hard consistence, and adheres firmly to the surface of the passage; if so, the introduction of a drop or two of olive oil into the ear, on the evening previous to the employment of the syringe, usually serves to soften as well as to loosen the secretion.

When, instead of discovering the existence of an increased or excessive amount of wax in the ear, the passage, as far as it can be inspected—and by the ear speculum, now extensively employed by aurists, the membrane of the drum can be rendered visible—is dry, inelastic in appearance, specially if it present a white, parchment-like aspect, and no ceruminous secretion be seen, it is probable that the deafness depends on the dry condition thus observed. Cases of this nature are very often relieved by the cautious introduction of a few drops of oil into the ear, which serves to lubricate the passage, and the membrane of the drum. A better substance for this purpose than ordinary oil is glycerine, which, since the publication of Mr. Wakley's experience of its use, has been successfully employed in a large number of cases. Before introducing the glycerine, the ears should be carefully cleaned by means of cotton dipped frequently in warm water, held between the blades of a pair of forceps, and then rubbed with dry cotton; a portion of cotton, well soaked in glycerine, is afterwards to be introduced, and repeatedly passed backwards and forwards, so as thoroughly to lubricate the ear. The application should be practised twice or thrice weekly for several weeks.



**DIARRHŒA**, from the Greek word *diarreo*, to flow through, is the term employed to indicate the occurrence of frequent loose or watery stools. This condition may exist as a symptom of other and severe disease, as in many cases of consumption already considered; but it often occurs as an independent affection.

The most common form of this very common ailment is that which arises from an error in diet. A person partakes of food which is not wholesome, or of some particular article of food which in his individual case or circumstances disagrees; the consequence is an attack, more or less severe in its nature, of diarrhœa. Along with this, the main disturbance, there is generally sickness and vomiting, distention of the belly, with wind and pains in the bowels like those of colic. Other indications there are of a disordered condition of the digestive and assimilating functions—a furred tongue, and a heavy or foul breath; but there is no febrile disturbance, the pulse and temperature of the body remain quite natural. This variety of diarrhœa is peculiarly apt to occur after a debauch. The sound advice of Milton has been neglected :—

“Observe

The rule of not too much, by temperance taught,  
In what thou eat'st and drink'st; seeking from thence  
Due nourishment, not gluttonous delight.”

Specially is this form of diarrhœa excited by the mixture of different articles of food and drink,—malt liquor and wines, for example. Cullen gave it the name of “diarrhœa crapulosa,” literally “drunken diarrhœa;” which it often is, but by no means always.

It is well, in connection with the occurrence of this complaint, to hold in remembrance that certain articles of food, not taken in large or immoderate quantity, are likely, in some individuals, to occasion diarrhœa: thus, pork, in any form, cannot be taken by some; oysters and other shell-fish, honey, or mushrooms, by others. Besides these, the consumption of raw vegetables, of meat in which a putrifying change has commenced, yielding what by some would be

simply styled a game flavour, of acid wines, of most fruits, and of many other articles to which reference might be made, tends more commonly in warm or close weather than in cold to provoke diarrhœa. In respect to many of these, custom works wonders; it is only the first or first few indulgences that are thus followed. The acid *vin ordinaire* of a French *restaurant* or *table d'hôte* seldom fails, when taken for the first time, to produce colicky pain and diarrhœa; and the *kalbfleisch* of a German *gasthaus* usually exerts the same pernicious influence; but when the penalty of indulgence has once been paid, a tolerance of the articles referred to is generally maintained.

There are other causes which lead to the establishment of a common looseness or diarrhœa. Mental emotions of various kinds exert a strange influence in this way, more particularly do the depressing passions of the mind thus operate; grief does so, fear still more. Who is there of ordinary physical and psychical constitution who has not experienced something of this kind? How very common it is, is shown by our expressive, though it be a vulgar word, "funk;" literally that means to envelop with a filthy smell, also to stink through fear, and simply to be afraid.

The safest and most efficient means of treatment to adopt in cases of diarrhœa, caused by the presence of irritating or offensive matters in the stomach or bowels, is to purge gently with medicine. If much pain or uneasiness in the belly exists, then, along with the cathartic, an anodyne may be given; thus, a dessert or table spoonful of castor oil, with a few drops of laudanum or solution of the muriate of morphia, or tincture of rhubarb with the latter. In the great majority of cases, immediate relief will follow the adoption of this plan; in some it may be necessary to repeat the dose of the laxative with the soothing medicine. In certain instances, however, the complaint continues; perhaps from day to day increases in severity. In such circumstances astringent remedies must be employed; and in selecting such, it is well to begin with the milder forms in the first instance, and, if necessary, have recourse to more powerful. Lime-water,

either alone or with some vegetable infusion, as that of the angustura bark (*cusparia*), one or two table-spoonfuls of each, from time to time; or a like quantity of the favourite remedy, the chalk mixture, taken after each liquid stool (the chalk mixture, with the addition of a little laudanum and tincture of catechu, is also a valuable medicine, see Appendix). If these means fail, then more powerful astringents are the acetate of lead (combined with opium, in the lead and opium pill); sulphate of copper ( $\frac{1}{4}$  to  $\frac{1}{2}$  grain); tannin (3 grains); decoction of logwood (*hæmatoxylon*), 2 table-spoonfuls for a dose; bistort (*polygonum bistorta*) 30 grains. These remedies may be administered at intervals of two or three hours, or for some time at least, after each unnatural evacuation. It is of great consequence, in the treatment of diarrhœa, specially in its severer form, that the patient be kept entirely at rest, and that the warmth of the body be maintained: hence, confinement to bed in all such cases is expedient; and from the application of hot fomentations or mustard poultices over the belly benefit may arise.

In the form of diarrhœa now briefly described, the frequency and liquid nature of the evacuations are the distinguishing marks; there are, however, other varieties of the complaint, as, for example, that affection, common in children, in which the food, in a partially digested or almost entirely undigested condition, is passed at stool, and the proper treatment of which consists in carefully regulating the diet, and giving from time to time small doses of such remedies as rhubarb, magnesia, and gray powder. Another appearance is presented by the stools in certain cases, chiefly in adults; there is the passage of much mucus in a stringy form, and shreds of a whitish membranous aspect coat the motions. This is essentially a chronic complaint; and the remedies, beyond a careful regulation of diet, which have proved most useful in its treatment, are arsenic and pitch. There are other peculiar alterations visible in the evacuations; as, for example, the presence of fatty matters. To these it is unnecessary here to allude. The judicious physician will, in all cases where such inquiry is requisite,



take the opportunity of observing the appearances presented by the stools. The diarrhœa of children, specially of infants, a subject of great importance, will, in order to save repetition, be considered under the head of *Teething* (p. 208).

**DIPHTHERIA**, or Diphtheritis (from the Greek word *diphthera*, signifying a skin). The latter term, or *Diphthérite* in the French, was applied, about 1820, by M. Bretonneau, a distinguished physician of Tours, in France, to a class of diseases which presented this one character in common, namely, a tendency to the formation of a false membrane. These affections were seated in the various mucous surfaces of the body, and in the skin itself. Nevertheless, the term Diphtheritis has always had a special reference to the affection of the mucous surface of the mouth and throat. The word Diphtheria we owe to the present Registrar-General of England; and though the disease now to be shortly described was familiar to many physicians in this country under the original appellation of Bretonneau, it is well known that, owing to the recent prevalence of the affection in England, the former has completely taken its place.

The commencement of an attack of this disease is ordinarily not attended by any alarming symptom. It usually comes on in very much the same way as a common sore throat does. After a slight feeling of coldness, it may be after a shivering fit, the act of swallowing becomes a little difficult, and, after a short time, accompanied by considerable pain and discomfort. By degrees, febrile symptoms, more or less marked, supervene; and before long the true nature of the disease may be recognized in the formation of that pellicle, or false membrane, whose existence alone suffices to distinguish it.

If the throat be examined before the appearance of the adventitious membrane, a slight degree of swelling, with redness, circumscribed and dotted in character, are the only signs observable in the back part of the mouth, or over the tonsils. A short time elapses; the difficulty in swallowing,



and feeling of general discomfort, with the febrile symptoms already referred to, are increasing; and now, if the throat be examined, over the surface of one tonsil—perhaps of both—there will be seen small spots, having an appearance like that of coagulated mucus, being in the first instance translucent. This is the commencement of the adventitious product. Very shortly its translucency is lost, and from being thin also it becomes denser in consistence; though it is only in rare cases that it attains a greater degree of thickness than a few lines. And with these changes there is a corresponding development in its extent. The pellicle now covers the whole of the back part of the mouth, stretching forward over the soft palate, and apparently tending to pass downwards out of inspection's reach. Bleeding is apt to occur, not to any amount, rather a slow oozing from the affected surface; the breath becomes by degrees more and more disagreeable; and the amount of saliva which trickles from the mouth is often considerable. The voice, too, is altered, becoming dull and nasal in character. There is cough, usually not violent; but in cases where the air-passages have become more directly involved, the cough does not differ from the convulsive cough of croup. In the same manner the breathing may be but little affected; usually there is some amount of impediment to its free performance, but if the false membrane have entered the air-passages, the difficulty of breathing is rendered urgent. If the back part of the nostrils becomes implicated, as is not unfrequently the case, a discharge through the nose of a yellow colour, and possessing a fetid odour, is apt to occur. Again, if the mouth becomes coated with the membranous shreds, very great discomfort is experienced.

Though the febrile symptoms which mark the onset of diphtheria are by no means grave in character, they speedily become more developed, and, in many cases, acquire a highly aggravated form. The pulse is apt to be small and feeble; thirst, and complete loss of appetite, are usually present; diarrhoea, too, even passage of blood from the bowels, may occur, sometimes connected with the existence of a false

membrane over the intestinal mucous surface. Vomiting, though rare, is not very uncommon. Great depression, feebleness, with lowness of spirits, complete the list of symptoms.

This disease is not exclusively, as croup and false croup so nearly are, a disease of childhood; but, nevertheless, children are more subject to diphtheria than adults. It has been known to attack very young infants; but this is far from common. Bretonneau mentions a case in a child of a fortnight old. When diphtheria occurs, as it is prone to do, in an epidemic form, then old people and adults are attacked in a manner quite as remarkable as children.

Sex does not appear to exercise any predisposing influence in this disease. There can be no doubt that those who manifest the greatest susceptibility to diphtheria are such as are placed in indifferent or positively bad hygienic conditions, and that the affection attacks, in greatest number, those who have been previously debilitated by severe diseases. While there are exceptions to this rule, there can be no hesitation in affirming that it holds true of diphtheria occurring in a sporadic form; and it is also very probable that the circumstances now mentioned facilitate the development and progress of the disease as an epidemic malady. Dr. West states that he has seen most of the disease as a very dangerous complication of other ailments, and specially of measles.

Those seasons which are damp and cold predispose to diphtheria; cases are more common in spring and autumn than in summer, or even winter. The affection occurs in all climates. Ghisi, at Cremona, in Italy; Bard, at New York; Chomel, at Paris; Trousseau, in the same city; Bretonneau and Gendron, at Tours, have described it. Climate, however, must influence it variously.

Though certainly not endemic in any part of this country, as it appears to be in certain parts of France—for example, Picardy and Touraine—diphtheria may and already has appeared among us in an epidemic form. Such outbreaks of the disease have been familiar to physicians. Bretonneau has recorded instances in various places: at Tours, Chenus-

son, and La Ferrière. Bourgeois has described a small epidemic visitation in the palace of St. Denis, near Paris, in 1835. Mazade, Lespine, and others, have written accounts of various epidemics. In the years 1855 and 1856 there was a fatal outbreak of diphtheria at Boulogne-sur-Mer. Many children and grown-up persons were carried off; among others, the members of several English families. It is since that time that cases have occurred in various parts of England—since the occurrence of what has been called the *Boulogne sore throat*—that so much has been said regarding diphtheria.

Although it is not in all cases propagated by contagion, it is frequently so communicated. The sick should therefore be isolated whenever the disease appears, and the sound should be protected by the use of antiseptic precautions.

The manner in which death occurs in fatal cases of diphtheria is various. When the false membrane reaches into the air-passages, there may be suffocation similar to what takes place in croup: or the increasing difficulty with which the air reaches the lungs, failing, therefore, properly to purify the blood, may cause insensibility and death by stupor: or, and this is the most common event in adults, when the disease is epidemic, there accompanies the local affection a low form of fever, attended by prostration of strength, a feeble pulse, delirium, and other symptoms; in this case the patient is said to sink, in other cases the fatal result is sudden and due to failure of the heart.

Diphtheria is frequently accompanied and followed by muscular paralysis. The paralysis may be confined to the throat, changing the tone of the voice, and interfering with the act of swallowing. It may affect the legs, the arms, or the whole system. It frequently induces squinting or dimness of vision, by paralyzing the muscles of the eye. It may affect the heart. In some cases, instead of actual paralysis, there is a loss of regulating power; the patient staggers in walking, although he is able to move his legs. Sometimes, also, diphtheria is followed by severe neuralgia.

The proper treatment of diphtheria divides itself into two heads, general and local:—



It must be remembered that diphtheria is a disease generally accompanied, at all events speedily followed, by remarkable failure of the vital powers; and that, in such circumstances, remedies of a depressing nature are forbidden, while encouragement is held out to exhibit those of a tonic or stimulating character. Undoubtedly, in many instances which have been recorded—as, for example, in England, by Dr. Heslop of Birmingham, and Dr. Kingsford—iron and chlorate of potash have exercised a remarkable influence over the complaint. The iron may be administered in the form of the tincture of the muriate, and in doses varying from 10 to 30 drops, according to the age of the patient, every two or three hours. Chlorate of potash is given in solution in water, in doses of 2 or 3 grains for a child; for an adult, 5 to 10 grains repeatedly; or a drachm may be dissolved in water and used as a drink in the course of twenty-four hours. While such remedies are used, the patient's strength may be further maintained by nourishing food, specially by beef-tea and milk; and, even after the inability to swallow has become complete, the injection of beef-tea may secure the due supply of nourishment.

Local remedies must be assiduously employed from the commencement of the malady. Gargles of quinine, 2 grains to the ounce of water, with a few minims of dilute sulphuric acid, permanganate or chlorate of potash, and boracic acid, are among the best. They should be very frequently repeated, and may be either used as spray, or gargle, or gently sponged over the affected surface.

**DIZZINESS**, termed, in medical language, *Vertigo* (literally, a turning or whirling round), is a very common symptom. It may be connected with the existence of disease in the brain; but, in the numerous instances where this peculiar and disagreeable sensation in the head occurs, it is the consequence of a disordered stomach, and is to be relieved by such means as tend to remove the cause upon which it depends. A dose of Gregory's mixture, or, if the bowels be confined, of a smarter purgative, should be taken. In an



enfeebled state of body, as in the instance of a convalescent from severe disease, the sensation of dizziness may be experienced, indicating an approach to fainting.

**DROPSY** (from two Greek words, *hudor*, water; and *opsis*, an appearance) is the term employed to denote the effusion of serous fluid into any cavity of the body, or into the cellular tissue under the skin.

Dropsies are of different kinds, and are also variously named, according to the particular locality in which they occur. Dropsy is properly regarded as a symptom of disease, rather than itself a disease; for in the great majority of instances in which it occurs, the original cause is a morbid change in one or other of the principal organs of the body—the heart, liver, or kidneys.

In the treatment of cases of dropsy, reference must always be had to the particular condition on which it depends; but, generally speaking, those remedies are serviceable which tend to increase the normal excretions of the body. Such are purgatives; diuretics, which increase the flow of urine; and diaphoretics, by which the transpiration through the skin is augmented.

**DYSENTERY.** This word is compounded of two Greek words, *dus*, painful; and *enteron*, the bowels.

The essential characters of this disease, which has been known since the earliest period of medical history, are severe pains of a griping nature in the belly, followed by frequent and bloody stools, the motions being accompanied by much straining and sense of bearing down. The latter symptoms are extremely characteristic. A patient affected with dysentery remains a long time at stool, straining, his features distorted by the pain he suffers; scarcely can he at times be persuaded to leave the stool, until he feels so faint that he cannot longer maintain the erect posture, and sometimes he faints. Straining, and the painful sensation of bearing down experienced in the lowest part of the bowels, do not occur in simple diarrhœa; they are peculiar

to dysentery; and so also is the discharge of mucus and blood. It is the large bowel, the lowest portion of the alimentary canal, which is affected in dysentery.

It is customary to distinguish between two forms of dysentery: the acute or febrile, and the chronic or non-febrile disease. The former may occur without any premonitory symptoms; more commonly, however, it is preceded by some degree of general uneasiness, lassitude, impaired appetite, and disagreeable sensations in the belly, together with a confined or a loose condition of the bowels. These symptoms may have been present for a few days, when there occurs a chill; sometimes, however, the feeling of cold is the first in order, preceding the local symptoms. In mild cases there is no occurrence of febrile excitement. The severity of cases of dysentery is measured by the frequency of the calls to stool: sometimes these are incessant.

The great majority of cases of simple non-epidemic dysentery recover; a favourable change, for the most part, taking place between the sixth and tenth day. In very severe instances, symptoms indicating much depression of the vital powers may occur at an early period; and, in such circumstances, dysentery may prove fatal in a few days. The chief danger, however, is from the disease lasting more than a few days. The unfavourable symptoms which, by a longer or shorter time, precede death, are a swollen condition of the belly, the tongue dry, pulse feeble, the occurrence of delirium, the stools and urine passed in bed, surface of the body becoming cold; while the character of the dejections is altered: formerly mixed with feculent matter, the greater proportion of which, however, is retained, they present the appearance of bloody water, like the washings of flesh.

Dysentery shows no preference for particular age or sex; and if men suffer more, it is because they are subjected in greater degree to the influence of those causes which excite the disease.

It is more frequently met with in summer than in winter,

far more prevalent in hot than in cold seasons. In India and other warm climates dysentery is a common disease. Those situations in which a malarial or miasmatic influence resides, are very generally found to harbour dysentery. Besides this, the disease is at times found to prevail in an epidemic form.

A slight attack of dysentery will often yield to the same plan of treatment which has been already recommended in diarrhoea,—the employment of a cathartic with an anodyne (castor oil with laudanum); warm fomentations or mustard poultices being applied over the belly; the patient being confined to bed, and only allowed to partake of food the most simple in its nature. The operation of a laxative is most beneficial in removing from the bowels the offensive matters which collect when the mucous membrane is the seat of the inflammation; besides, the feculent matter which is retained acts injuriously, and it is well to favour its removal by gentle laxatives. When a decided amelioration does not speedily occur in such cases, the plan of treatment is not to be at once abandoned. Astringent remedies may be employed; but after they have been used for a time, a laxative should again be administered: thus, opium in one grain doses (for an adult) may be given every two hours, or even more frequently (if the case be sufficiently urgent), or the lead and opium pill; and after a time the dose of castor oil should be repeated.

In the severe form of dysentery, a more energetic plan of treatment is oftentimes demanded. There are many cases in which we fail to recognize the existence of any marked favourable tendency; on the contrary, there is a manifest malignity about the disease which too frequently renders the best skill of the physician abortive. Local blood-letting by leeches does good early in the disease, and is more particularly called for when there exists much pain and tenderness over the bowels, and when, at the same time, there is a considerable amount of febrile disturbance. When the disease sets in with much nausea, and with other symptoms of special disorder of the stomach and liver (bilious vomit-



ing), then emetic remedies are serviceable (ipecacuanha or sulphate of zinc, see Appendix).

When the disease continues after the employment of the laxative remedies already referred to, the object to be held in view in their exhibition being to free the bowels from irritating secretions and fecal accumulations, as well as to relieve the congestion of the intestinal blood-vessels (besides castor oil, calomel in 5 to 10 grain doses, may be used for this purpose), then recourse must be had to opium, in one or other form: it is the *summum remedium*. Sydenham, "the prince of English practical physicians," speaks in the strongest possible terms of the virtues of opium. He saw dysentery in its severest form; while his practice was to bleed, then to give a cathartic, and afterwards to take refuge in opium (laudanum). "Whatever," he writes, "may be the fears of inexperienced practitioners, I, for my own part, have never yet seen any mischief arise from the repetition of many opiates." Opium may be given alone, or in the form of Dover's powder (compound ipecacuanha powder); 1 or 2 grains of the former may be given at intervals of every two or three hours. Ipecacuanha alone has been highly extolled by some as a remedy: in the form of Dover's powder (every 10 grains of which contain 1 grain of opium and 1 of ipecacuanha), it is certainly valuable; and in less severe cases than those in which opium is imperatively demanded, may be given in 5 grain doses frequently repeated. The use of ipecacuanha in large doses (20 to 30 grains) is also praised by some practitioners as surpassing all other medicines in value.

Injections (enemata) are most useful in the treatment of dysentery. Many Indian practitioners who have seen much of the disease in its worst forms—for example, an eminent physician of Calcutta, Dr. Hare—place the greatest reliance on the efficacy of injections. They are specially useful in bringing away offensive collections. Such may either be simple, consisting of warm or cold water—in this country the former, perhaps, are preferable—cautiously injected; or, medicated, they may contain ipecacuanha in powder, dis-



tributed through warm water (1 drachm to 4 drachms of the powder in a pint or pint and half of water); or, as more fully described in the Appendix, they may consist of opium with starch, acetate of lead, or sulphate of zinc in solution.

When opium, given alone by the mouth, appears to disagree, or when, notwithstanding its employment, the disease continues unchecked, there are other remedies to which recourse may be had: acetate of lead is best administered in combination with opium (lead and opium pill); sulphate of copper ( $\frac{1}{4}$  to  $\frac{1}{2}$  grain), in pill with opium; these may be exhibited at intervals of an hour or two hours, or, for a time at least, after each unhealthy dejection.

When the disease occurs in a person of enfeebled habit of body or of depraved constitution, still more if the case present what is termed the adynamic type, accompanied by fever of a low character, the great indication will be to support the strength, to prevent, if possible, the complete yielding of the vital powers. In such circumstances, from an early period, perhaps from the very commencement, stimulants will be required,—wine or brandy.

The diet will, of course, vary a good deal, according to the nature of the individual case. If the attack of dysentery be slight, the more solid farinaceous articles may be allowed; rice and arrow-root, with sweet milk, or, better still, milk with an admixture of lime-water, for drink.

During convalescence great care must be exercised, lest by any imprudence a relapse is occasioned. Mutton and beef-tea, thickened with arrow-root or isinglass, is the safest article of food for the recovering patient. When the case is more severe, and, from the decay of the patient's strength, it becomes a matter of importance to keep up the system, arrow-root, with the addition of a little port wine, and strong mutton or beef tea, should be administered from time to time.

As already stated, there is also a chronic form of dysentery. The acute affection now briefly described shows, in some instances, a tendency to pass into the chronic disease. The latter is distinguished by the absence of all febrile

symptoms, and by the long continuance of a condition of relaxation of the bowels, the discharges containing blood, mixed, to a greater or less extent, with feculent matter. The belly, in such cases, is sometimes tumid, at others relaxed; there is apt to be great emaciation, and general feebleness; the tongue becomes smooth, red, and glazed; great thirst is also a symptom. In such cases change of air often does good. Great attention must be paid to the food of the patient. Indeed, the original cause of the disease is very generally a long-continued irregularity in the matter of diet. It is common among sailors, subsisting on salt provisions, and much exposed to the most frequent exciting cause of dysentery in both its acute and chronic form—namely, cold, and specially cold with damp. Diet, in chronic dysentery, should be nourishing, but not in any degree stimulant, consisting of farinaceous articles, and mutton or beef tea. The astringent and alterative remedies are those most useful in its treatment: opium; decoction of hæmatoxylon; the infusion of cusparia, alone or with lime-water; one of the salts of iron, the perntrate (see Appendix). The employment of enemata is also useful. The patient should be clothed in flannel. Port wine is the best stimulant when such is required.

Persons who have once suffered from dysentery are apt to be again affected by it; and there are some who, upon the slightest exposure to any of the ordinary exciting causes of the disease, have an attack. Such should employ a preventive treatment. The wearing of flannel, at least over the belly, is indispensable for persons thus easily affected; and the due regulation of diet is equally so.

**DYSPEPSIA.** See *Indigestion*, p. 147.

**EARACHE**, a form of neuralgia (which see, p. 173), often occurring in an extremely severe degree, the pain being at times limited to the ear, at others shooting over to the temples and cheeks. Hearing is generally more or less affected, but it may be unusually acute, or deafness may occur; or, as is most common, peculiar sounds are heard.

In the treatment of this affection regard must be had to the general state of the system; but local applications, not unfrequently, are serviceable; for example, gentle rubbing with the chloroform liniment in the immediate neighbourhood of the pained part, and warm poultices, specially the chamomile poultice, over the whole ear.

**EPILEPSY**, or the Falling Sickness, a disease well known to, and the phenomena of which have been accurately described by, several of the ancient authors. The former term is derived from the Greek word *epilepsia*, which signifies a seizure.

Before the occurrence of an epileptic fit there is, in many cases, a peculiar sensation, brief in its duration, experienced by the patient; a scream or cry is then uttered, and he falls heavily to the ground. Entire loss of consciousness exists; the countenance, at first pale, soon becomes flushed, and the limbs and features violently convulsed; usually the thumbs, in both hands, are drawn across the palms, and the fingers so powerfully clenched, that, if the nails be long, deep marks are left in the hand. Very often the tongue is injured: being thrust out of the mouth while the jaws are relaxed, the spasm again occurs, and the tongue is held between the teeth; it is thus that the bleeding from the mouth so frequently seen in the epileptic fit is occasioned. A very characteristic feature of the fit is the appearance of froth at the mouth: the eyes are turned up, and generally the white portion is alone visible. During the continuance of the fit the breathing is short and hurried: occasionally the urine is discharged involuntarily; this happens towards the conclusion of the paroxysm. The period during which the patient remains in the state of insensibility, resisting all attempts at rousing, varies; usually, however, it does not exceed fifteen minutes, and is often much shorter. Before consciousness returns, a profuse perspiration usually breaks out over the whole body; and, after its return, very commonly the patient falls into a deep sleep, which continues for a considerable period.

The description now briefly given is that of the severe variety of epilepsy; but the disease sometimes assumes another form, in which little or no convulsive movement occurs,—there is merely a sudden and momentary unconsciousness. To distinguish between these, the former has been denominated, by French writers, *le grand mal*; the latter, *le petit mal*.

The period of recurrence of the fits in epilepsy is extremely variable. Death sometimes occurs in the first; or, though rarely, recovery taking place, the disease never returns. Years may intervene; much more frequently an irregular period of months, weeks, or days, separates the attacks. There are cases in which a fit occurs daily; and not unfrequently several or many take place on the same day; but, thereafter, there follows a long interval of freedom. Epilepsy may occur, for the first time, at any age. The attacks take place more frequently by night than by day, and this holds true more particularly of the earlier seizures. Patients have no recollection of what has taken place during the fit; and not a few recover completely from the condition of insensibility and remain unaware of its having ever occurred.

Epilepsy is usually regarded as an hereditary disease. When the disease is fairly established, the powers of the mind, as well as the vigour of the body, are apt to become gradually enfeebled; and, after epilepsy has existed for any length of time, it becomes easy to recognize its victims by the peculiar look of hebetude they present, and by their appearance of bad health. Debauchery of all kinds predisposes, in a very remarkable manner, to epilepsy.

It is very rarely that a decidedly favourable view, as to ultimate recovery, can be reasonably entertained or expressed in this disease; still there are, undoubtedly, instances in which the physician is fully entitled to entertain the hope that the tendency to the disease may be overcome. Those cases are most amenable to treatment in which the occurrence of the convulsive disorder is evidently connected with some cause of irritation, seated in a part of the body other than the nervous centres. Under the latter category,



for example, are to be ranked attacks of epilepsy in young women who are affected with menstrual disorder, and in those persons who suffer from the presence of worms in the course of the intestinal canal; the removal of these sources of irritation have, in not a few instances, led to the complete cure of the more serious disease.

In regard to the treatment of epilepsy, there are two main considerations: first, What is to be done during the fit? and, second, What plan is to be pursued in the intervals, in order that, if possible, its return may be prevented?

In the treatment of the fit, the great object to be kept in view is to prevent the unfortunate patient injuring himself. He should be placed on a sofa or bed, with the head raised, and the dress immediately loosened; cold water may then be applied to the head: this being done, the result should be awaited. Nothing is to be gained by the forcing open the closed hand; nor, contrary to the vulgar belief, can the exercise of any power or violence, on the part of the physician or attendant, shorten the fit. In the management of the epileptic patient during the intervals of the attacks, it is necessary to attend to certain important particulars. Dr. Sieveking of London, a recent writer on epilepsy, has observed that, "before selecting the mode of treatment to be pursued in an individual case, a most minute and searching inquiry into the patient's antecedents is necessary." This the judicious physician will never fail to carry out: for, in such circumstances, the opportunity afforded him of doing good depends, in great measure, on the knowledge he acquires as to the constitution of his patient, and as to the various influences and exciting causes to which he has been exposed; one or other of which, in all likelihood, is so powerful as to determine the attacks of the convulsive disease. A brief reference can only be made here to some of the more important remedies in general use in the treatment of epilepsy, and then to the proper hygienic management of the disease. If the patient be young and strong, and present the appearance of plethora or fulness of blood—and more particularly if headache, either constant or fre-

quent, is complained of—it may be proper to take a little blood from the general system, at all events locally, by leeching or cupping, and then freely to purge; while, for a considerable time, an abstinent regimen is persisted in. There are probably few physicians who have not witnessed good results, in certain cases, from this plan of treatment. Dr. Schröder Van der Kolk, an eminent physician of Utrecht, who has devoted a large amount of attention to this disease, places great reliance on the use of derivatives,\* preferring the repeated use of cupping to the application of leeches; by this alone, he states that the attacks are often remarkably diminished. In other instances, where there does not exist the same degree of congestion about the head and neck, great benefit is oftentimes experienced from counter-irritation, the use of blisters, irritating ointments, and the seton or issue (see in Appendix). Purgative remedies are often useful; indeed, it is a good rule to exhibit from time to time a smart purgative, in order that the bowels may be properly cleared, and that no irritating cause remain in operation there. The compound rhubarb and colocynth pill, castor-oil, and the sulphate of magnesia, are the most suitable cathartic remedies in cases of epilepsy. A great many tonic medicines have been recommended for this disease; the virtues of one being extolled by certain physicians, while others are apparently as confident of the powers of a second. The fact is, however, that there are cases of this sad disease which bid defiance to all treatment—an acknowledgment which the well-informed physician will be always ready to make. Of tonic remedies, those which have gained the highest amount of professional favour are, certain preparations of zinc, steel, arsenic, silver. Of all remedies which have been employed in the treatment of epilepsy, the most valuable is the bromide of potassium, which may be given in 10 to 30 or 40 grain doses three times a day. In many instances it diminishes the tendency to the fits, and in some no fit occurs while the medicine is

\* The term applied to those remedies which act by derivation; that is, determine the blood from one part to another.

being used. It appears to act by diminishing the nervous excitability. Again, of remedies which act more directly on that portion of the nervous system which seems to be the seat of irritation in epilepsy (medulla oblongata), the observations of Schröder Van der Kolk, and M. Brown Sequard, raise a reasonable hope that in conjunction with other treatment, specially derivative, the administration of belladonna may prove serviceable. (In the Appendix will be found some further observations on these and other remedies.)

In the hygienic treatment of epilepsy there is room for constant watchfulness and the strictest degree of attention. Dr. Sieveking judiciously observes: "The air the patient breathes, the water he drinks, and his ablutions, his daily occupations and habits, his amusements, the state of his sexual functions, his food and beverages, his clothing, his mental and moral history, his prospects in life, should be inquired into, in order to determine whether, or in how far, one of these elements may require modification." The sufferer from epilepsy must never be permitted to be placed in circumstances which, were a fit occurring, an accident to himself might be occasioned. The bed he sleeps in should be low, lest by a fall from it, when seized, he might be injured; the fire in the room he inhabits should be protected by a guard. Riding on horseback, in a gig, on a coach, fishing or shooting—all pursuits of a similar nature must be forbidden to the epileptic; but gentle exercise in the open air of the country, in the company of a friend and the society of a few companions, he may safely indulge in. His diet must be non-stimulant, the articles of food being well cooked, and taken at regular intervals, while sufficient time for thorough mastication and for digestion is allowed.

**EPISTAXIS**, or bleeding from the nose (the former term being derived from two Greek words, *epi*, upon, and *stazein*, to fall drop by drop), is the most frequent in its occurrence of all hemorrhages, while it is only in occasional cases that its abundance so far affects the health as to demand the resources of medical art.



Occurring independently altogether of any other affection, epistaxis is most common in youth; more frequent among boys than girls; and the subjects of it generally possess a strong constitution, are of the sanguine temperament, and often present, in a degree more or less marked, the appearance of a full habit of body—what is called plethora. In those who are thus constitutionally predisposed to bleeding from the nose, only very slight exciting causes are necessary in order to provoke its occurrence: such are blows upon the nose, sudden and violent sneezing, coughing or laughter; any very powerful muscular exertion, especially if accompanied by a hasty alteration in the posture of the body; exposure to great heat of the sun, or from fires; interrupted return of blood from the head, as by wearing tight neck-cloths or other articles of dress; irritation of the nostrils by picking, or the entrance into them of irritating vapours; any causes which tend to produce a flow of blood to the head or face, as in taking stimulating drinks or food—hence those who are subject to frequent attacks of epistaxis suffer generally after dinner.

There are probably few persons who have not experienced, in their own persons, an attack of bleeding from the nose. Sometimes a warning of its approach is given by a feeling of fulness or of tightness, occasionally of giddiness in the head, or even of general headache. When the blood makes its appearance, which it does usually from one nostril, but at times from both, it falls drop by drop; these, quickening in succession, occasionally form a little stream. If the blood flows very freely, a portion passing down the posterior nares will enter the mouth, and may be swallowed.

Attacks of epistaxis occurring in healthy children, the usual subjects of it, may be regarded as salutary, and in the great majority of instances will prove to be so: they are the immediate consequence of congestion, which the flow of blood satisfactorily remedies and removes. It is only when the amount of the hemorrhage proves excessive that there is room, or indeed any warrant, for interference. In not a few cases, if properly inquired into, it will be found that



the epistaxis followed the occurrence of headache, with flushed countenance, or other symptoms indicating some degree of derangement in the circulation; and further, that after the hemorrhage these symptoms entirely disappeared.

There are certain varieties of nasal bleeding in which the discharge of blood occurs either in connection with a disease—and that may be local or general—or in close connection with certain deviations from health; the consideration of both of these, but specially the latter, is important. Epistaxis is found to occur in cases of polypus, and in connection with inflammatory action and ulceration within the nostrils. Among the morbid constitutional states in which nasal bleeding is prone to occur, may be mentioned that one—common in childhood—in which there exists a general tendency to hemorrhage, due to a particular condition of the blood; while the bleeding is not from the nose alone, but from the gums and mouth, as well as other mucous surfaces. As a complication, and at times a severe or even alarming one, epistaxis is found occurring in the course of inflammatory diseases and of fevers. In certain structural diseases of organs this form of hemorrhage is apt to occur, as in those of the liver, lungs, and heart, but chiefly the kidneys.

The moderate flow of blood from the nose is to be regarded as decidedly salutary in persons who have reached or passed the middle period of life, and are of full habit of body; it is, also, not unfrequently found to occur in young women, in the place of an interrupted menstrual discharge. In the former case there may be more apprehension regarding the disappearance than the occurrence of the bleeding; in the latter, if the normal discharge be established, the nasal bleeding will cease.

Every one is familiar with the common means which are employed to arrest bleeding from the nose: pressure of the nostrils together, and the application of cold water to the forehead and nose; also the sudden application of any very cold substance to the surface of the body, even at a distance—as, for example, of a key to the back, by which a sympathetic constriction of the superficial blood-vessels is occa-

sioned. Meantime the patient should be placed in a chair, or on a bed, with the head kept up and bent a little backwards, the neckcloth, or any tight article of dress over the neck, being removed. These means, usually successful, may prove ineffectual; recourse may then be had to local astringent remedies. One of the best of these is the matico (see Appendix); the leaves of which should be well bruised, and the powder so formed snuffed up into the nostrils. A solution of alum, in the proportion of 15 or 20 grains to the ounce of distilled water, is also a valuable application. Many others of the popular astringent remedies, or styptics, as they are called, may be employed for the same purpose. Small portions of lint, dipped in strong infusions of kino or rhatany, may be introduced into the bleeding nostril or nostrils, or the infusions themselves may be carefully injected by means of the syringe. Besides these local means, if the hemorrhage prove lasting or manifest a great tendency to return at short intervals, benefit may result from the use of laxative remedies, of which those of a cooling nature are most suitable. In some severe cases it has been found necessary to administer internal astringent remedies: gallic acid, or acetate of lead, in doses of 3 grains, frequently repeated. In addition to the simple local means which have been mentioned, M. Negrier of Angiers has called attention to a plan which he has frequently employed, and invariably with success. It consists in causing the sufferer, while maintaining the erect posture, suddenly to raise both arms perpendicularly upward, and to retain them for a short time in that position. If only one arm is raised, it should be that of the side upon which the bleeding occurs, and then, with the other hand, the patient may compress the bleeding nostril. In cases of young children a medical man or an attendant may perform both offices. Effectual pressure may also be exerted over the upper lip, through which the small blood-vessel going to the septum of the nostrils passes. Another mechanical contrivance is that which is known under the technical term of plugging the nostrils: this operation, more especially the plugging of the posterior

nares,—for both anterior and posterior compartments may require it,—is one necessitating the possession of some little skill, and must be executed by the medical man.

**ERYSIPELAS** (in the Greek *eruspelas*, a term employed by Hippocrates, signifying literally red skin) is the common inflammatory affection of the skin, popularly known in Scotland as the Rose, and in England as St. Anthony's Fire.

When occurring in its most distinct form, as affecting the head and face, the disease comes on in much the same way as other febrile disorders. There is a day or two during which the patient feels languid and out of sorts, and very frequently has some amount of sore throat; after which a shivering attack occurs, followed, perhaps, by vomiting, or slight diarrhoea; and then the blush of erysipelas becomes visible on some part of the face, usually in the neighbourhood of the nose. The part so affected is red, hot, and painful; it is also swollen, and has a hard feeling to the touch. The tendency of the inflammation is to spread, and very generally it does so till the whole face and the greater part of the head, including both ears, become involved, causing the greatest degree of deformity: the lips become enormously swollen; the eyelids so filled with serous fluid as completely to close the eyes. Commencing on one side of the face, in some cases, instead of passing to the other, the blush extends upwards to the scalp, or it may creep along to the ear, and over the neck. Sometimes regular blisters appear over the part most inflamed. In the course of three or four days the redness and swelling subside, and then a drying and separation—what is called desquamation—of the cuticle or scarf-skin occurs; while, in the loose cellular tissue of the eyelids under the skin, and at different parts of the scalp, matter is very likely to form, and, after a time, to require free vent by the use of the lancet.

The affection, thus briefly described, varies very greatly in its degrees of severity: it may be a comparatively trivial disorder; and, on the other hand, accompanied from the outset by marked constitutional disturbance, it is often a



dangerous disease, terminating not unfrequently in death. In violent cases the fever is high, and there is much wandering of the mind, or delirium; while, before the fatal event, there usually occur the symptoms of effusion in the brain, and the patient lies in an insensible state or coma. The affection of the throat may, in some instances, become a source of danger; and, in all cases of erysipelas, the condition of the throat should be observed.

Medical opinion is divided as to the contagious property of this disease: it is not improbable that, in circumstances the most favourable for its propagation, it is communicable. Very frequently it occurs in an epidemic form; while there are varieties of the disease, which need not, however, be particularly insisted upon here. The surgeon is apt to find erysipelas, in certain seasons, attacking wounds and sores; and more especially is this the case when patients are from necessity crowded together in badly ventilated wards or apartments, and damp as well as low-lying localities. The accoucheur meets with erysipelas in circumstances bearing a close resemblance to the experience of the surgeon, and looks upon the disease as one of the greatest dangers to the lying-in woman, for in an intimate manner is the affection of the skin and mucous membrane connected with the form of fever incidental to such patients, known as puerperal fever.

Concerning the treatment of erysipelas no precise rules, applicable to all cases, can or ought to be laid down; for this disease, like all febrile disorders, varies very greatly in different circumstances, and from time to time. Let it be acknowledged, and it cannot be too frequently or freely confessed, that the grand aim of the medical art is not so much to cure diseases as to assist Nature in her curative operations.

The unfavourable termination of attacks of erysipelas are most to be apprehended in persons of debilitated frame of body, and very specially in those who have led dissolute and intemperate lives. Besides such, there is a class of cases which—perhaps less frequently seen now than in former years—is still observed from time to time in single examples. When erysipelas attacks a person previously in the full enjoyment



of health, of a vigorous frame of body, and perhaps tending to corpulency,—in such circumstances putting on a type of constitutional disturbance very different from that which accompanies the local affection in the former class,—there is, owing to the very violence of the fever, much cause for solicitude. These examples of the disease are not to be treated after precisely the same fashion; on the contrary, while for the former a tonic, perhaps stimulant, plan will be required, the latter urgently demands the employment of remedies which will repress the general disorder of the system.

In the treatment of this disease, blood-letting, and more especially general bleeding, is now very seldom called for; still, there are circumstances in which the abstraction of a little blood, by cupping or leeches, or even from the arm, may prove serviceable—when, for example, the pulse is full, hard, and frequent, the heat of skin great, the headache acute, and, early in the disease, there is the wandering mind. The employment of a purgative is likely to be useful in the early stage of all cases. The affection of the skin is often connected with a disordered condition of the alimentary canal, and it is well, by such means, to remove any cause of irritation; for this purpose rhubarb, with magnesia, or soda and sulphate of magnesia, are probably best. When febrile disturbance runs high and continues, a small quantity of tartar emetic may be administered (one-sixth to one-fourth of a grain in solution) at intervals of a few hours, or the milderer spirit. When the case is such as demands the tonic treatment, then professional confidence is chiefly placed on two remedies, quinine and ammonia, and on wine. The quinine for this purpose is generally administered in large doses, and frequently repeated (12 to 24 grains in twenty-four hours); the ammonia, either as the carbonate, in doses of 5 grains dissolved in water, every few hours, or as the aromatic spirit (*sal volatile*) in teaspoonfuls, at like intervals. Of late years, as originally suggested by Mr. Hamilton Bell and Dr. Charles Bell of Edinburgh, the tincture of the perchloride of iron, in frequently repeated doses (10 to 20 drops

every few hours), has been largely used, and many physicians have recorded their favourable experience regarding it. The remedy is most suitable in those cases which require the tonic plan of treatment; but as it possesses febrifuge properties, being diaphoretic and diuretic, it is likely, also, that its employment is suitable in a still larger number of instances of the disease. The best external applications in erysipelas are flour, and fomentation by flannels, wrung out of warm water, or a decoction of poppy heads.

**FACIAL PALSY.** This is a by no means uncommon affection; and, like every form of loss of the power of motion in muscular parts, or palsy, has an alarming appearance. From one side of the countenance expression has vanished, while the other remains in its natural state, with this exception, that the angle of the mouth is more or less drawn aside. Patients who are thus affected are unable to close the eyelids on the palsied side, owing to the participation in the paralysis of the muscle concerned in that action; and, when they laugh, or merely smile, the deformity becomes more marked. The cheek hangs quite loose. Dr. Todd of London has shown that the inability to close the eyelids determines the peculiar nature of the palsy; and what is of the utmost importance, distinguishes it from the infinitely more serious form of facial palsy which is connected with the disease of the brain.

Essentially a local disease, facial palsy is due to the implication of one nerve only (the *portio dura* of the seventh pair); the nerve of motion supplying the various muscles of the face which are paralyzed in this affection. It is to Sir Charles Bell that we owe much of our knowledge of this form of palsy: he was the first to determine the particular function of the nerves of the face; hence, the affection under consideration is sometimes called "Bell's palsy of the face."

Perhaps the most common cause of this singular disorder is the influence of cold, specially exposure to currents of cold air; and cases so induced are the most amenable to treatment,—recovering almost invariably in a brief space of

time. Other exciting causes of it are mechanical violence, by which the nerve, in some parts of its course, has been torn or otherwise injured; and the presence of external disease in the course of the nerve, such as enlargement and induration of glands, or of Mumps (which see, p. 171); or of disease which is internal and not visible, implicating the ear or a part of the temporal bone. Dr. Todd has further pointed out the rheumatic or gouty origin of a certain number of such cases; and mentions that Mr. Bowman of London has found patients of rheumatic habit of body simultaneously affected by this form of palsy, and that of certain nerves of the orbit.

The view, as to ultimate recovery, which the physician entertains in cases of facial palsy, depends, to a great extent, on the cause of the disease: that by far the larger number of such are free from great anxiety, is a point of very great practical importance, useful in quieting the alarm which is invariably, or almost so, felt by the patient and his friends. But when due to injury of the nerve, more especially if the nerve have been divided or lacerated to a considerable extent, the paralysis will prove lasting, and, though not bringing life into peril, a source of much inconvenience, from the manner in which speech and mastication, possibly also vision and the act of swallowing, are embarrassed. There are a few cases, however, chiefly those connected with inflammation in the ear, and subsequent affection of the temporal bone, in which the facial palsy may occur as one of the earlier symptoms of a much more serious disease; and the judicious physician will hold in remembrance that the continued occurrence of a purulent discharge from the ear is always to be regarded with some degree of apprehension; while anxiety will certainly not be diminished by finding the co-existence of facial palsy. Such cases may terminate in disease of the brain.

The treatment of facial palsy will vary according to the causes which give rise to it, and the duration of the disease. When recent, and determined by cold or such other circumstance as may lead to inflammation, and especially if feverish



symptoms are present, the case is to be treated by the local abstraction of blood, the cupping-glass being placed immediately in front of or behind the ear; hot fomentations are to be applied; low diet and confinement to bed or the house enjoined. There are two remedies, both of which have been largely employed, and with much success, in the treatment of cases of facial palsy of the nature indicated: mercury is one, and the iodide of potassium the other. If the former is selected, it should be administered till the gums become a little tender, when it will generally be found that the paralysis has simultaneously vanished. In two cases which have recently come under the author's observation, both of which had continued for some time, the ordinary blue pill, taken twice daily, in one instance in five, the other in eight days, produced the slight mercurial action on the gums alluded to, and complete recovery resulted. The iodide of potassium is peculiarly suitable in the cases of persons who, at the same time, suffer from rheumatic pains; and there are many physicians who always employ it in preference to mercury: it should be given in doses of three to five grains thrice daily, dissolved in water. If the facial palsy be connected with a protracted purulent discharge from the ear and deafness,—the not uncommon consequences of scarlet fever in children of a scrofulous constitution,—there is little good to be expected from active treatment of any kind: the cleansing of the ear, gently but repeatedly, performed by means of the syringe, and the application of a blister, from time to time, behind the ear, with the proper regulation of diet, are the chief means to adopt.

**FAINTING**—a sudden loss of strength, or a swoon, in medical language Syncope (which in the Greek signifies literally a cutting short),—is due to a temporary diminution or suspension of the action of the heart, and is accompanied by interruption of the breathing and loss of consciousness, so that all sensation and voluntary movement are for a time at an end.

A faint may occur quite suddenly; usually, however, the



patient has some premonition, such as a feeling of sickness, or uneasiness in the stomach, or swimming in the head, or mental confusion; while the bystanders observe its approach in the remarkable change of colour in his countenance; pallid or ghastly pale it has become. When the patient has passed into the complete state of swoon, the surface of the body is cool and clammy; the pulse at the wrist entirely gone; the heart's sounds feebly if at all recognisable when the ear is placed over the chest; he lies insensible to all about him. This condition continues for a longer or shorter time, usually not more than a few seconds or minutes; and then the anxiety of onlookers is relieved by the patient again drawing a breath. Consciousness speedily returns, and with it colour to the blanched lips and face, and the power of muscular movement.

The direct or immediate causes of attacks of fainting are numerous and various; such may operate directly on the heart itself, or, what is of far more frequent occurrence, through the medium of the nervous system. Among the most common in their occurrence are diseases or injuries causing great pain; or, like the blow over the stomach, which, to produce fainting, need not be very severe, acting directly on the nervous system. Again, every one is familiar with the fact that violent shocks, such as are produced by intelligence of a joyful or mournful nature being suddenly communicated, or from being witness to sights of a distressing or revolting character, cause fainting. Other influences have a precisely similar effect; for example, a heated atmosphere or a crowded apartment, and certain overpowering odours, more especially those which at the same time produce a feeling of nausea or sickness. A draught of cold water taken when the body is hot often exerts a most depressing influence, and may even lead to fatal syncope. Loss of blood is a frequent cause of fainting; and, when excessive, it also may cause death.

When fainting occurs in connection with certain diseases—as, for example, disease of the heart—it is to be regarded as of a very dangerous nature, and not unfrequently in such

circumstances death ensues. When, on the other hand, the attack of fainting occurs in persons who are free from any organic disease, and as the result of the operation of one or other of the causes of syncope already mentioned, recovery speedily takes place.

There are certain persons, chiefly females, who are peculiarly liable to faint. Such should carefully avoid exposure to those circumstances which, in their individual experience, have proved the usual exciting causes of the attacks. When a person has fallen into a swoon, the very first point to attend to is the placing of the patient in the horizontal posture, the head being on the same level as the body and extremities; the access of fresh and cool air should be secured, and all tight articles of dress removed. The ordinary smelling salts, or strong acetic acid, should be held near the nose, and a little cold water dashed over the face: these means serve to rouse the nervous system, and renew the supply of blood to the brain. Whenever the patient is able to swallow, some warm brandy and water should be administered, or wine and water, or a little sal volatile. In instances of protracted duration, external remedies may be employed, such as the application of mustard poultices to the extremities; while, till the power of swallowing returns, warm brandy, moderately diluted with water, may be used as an injection.

**FISSURE OF THE ANUS.** This is an extremely troublesome, and, in many instances, very painful ailment: it occurs most frequently in adults—more commonly in men than women. The seat of the fissure or crack is the mucous membrane of the lowest part of the bowel. Not uncommonly the sufferer from fissure has been, for a long period, subject to indigestion, and to irregular action of the bowels.

In the treatment of this disease, reference must always be had to the condition of the stomach and bowels; and, if disorder exists there, the suitable means for its removal must be adopted. Various applications serve to allay the local irritation, which at times, and more particularly when the

bowels are moved, is apt to be excessive; but, in the great majority of instances, the only effectual remedy is the simple operation of making an incision through the mucous membrane of the bowel, including the fissure: thus converted into a simple sore, the fissure almost invariably readily heals.

**FISTULA.** This term, derived from the Latin *fistula*, which literally means a pipe, is used in surgery to denote the existence of a deep, narrow, sinuous ulcer. Such occur in many parts of the body; as, for example, in connection with the lachrymal apparatus, the urinary organs, and the bowels. When a person is said to suffer from fistula, it is the last which is almost invariably understood. In professional language this disease is called *fistula in ano*.

The fistula exists by the side of the bowel (rectum); in some cases having an opening externally, but no communication with the bowel; in other cases, and these more numerous, opening into the bowel, but having no external outlet; the former styled blind external, the latter blind internal fistula. A third form, and the most common of all, is that of the complete fistula, in which an external opening and also a communication with the bowel above exist. This disease is a very annoying and unpleasant one: in the complete fistula there is the escape of purulent matter, wind, and even feculent matter by the sinus; while there is always much irritation and heat about the seat. A reference to the association of this disease with consumption has already been made (see *Consumption*, p. 68).

The required treatment of fistula is surgical—the laying open with the knife its entire track; an operation demanding care in its performance, but not difficult to execute, nor painful to the patient.

**FLATULENCE** is one of the most common, it is often one of the most distressing, symptoms of indigestion. Gas, which is normally formed, and is, therefore, always to be found in the stomach and bowels, has been evolved in too



large amount; or, owing perhaps to some spasmodic affection of the bowels, or it may be to the simple abeyance of the ordinary movement in the bowels necessary for the passage of their contents, whether gaseous or solid, flatus has collected to an unusual extent in one part.

The most distressing feeling arising from flatulence is the sense of distention; and this may be experienced in the stomach itself, or in some part of the intestinal track. This painful sensation is, sooner or later, followed by the passage of the gas upwards or downwards—suddenly, it may be, like an explosion, or more gradually and favoured by movements which the patient has it in his power to make. If the air passes upwards, the patient is said to belch—an act which, for a time, seldom fails to bring relief. When the attack is a very severe one, and the amount of distention of the stomach great, there frequently occur pains, not only in the neighbourhood of that organ, but shooting up to the chest, even to the throat and head. Owing to the distended stomach—and the same applies, though less markedly, to the bowels when they alone are the seat of the flatulent collection—pressing against the midriff or diaphragm, the breathing becomes considerably embarrassed. In connection with flatulence, unless merely accidental in its occurrence, there is usually found derangement of the function of the bowels, very often a confined condition or obstinate constipation; while, in some cases, the same cause which determined the flatulence—some marked error in diet—gives rise to a condition of looseness or diarrhœa.

The habitual sufferer from flatulence should exercise very great caution in regard to both regimen and diet: walking immediately after making a hearty meal, or the sitting down to some laborious mental occupation whenever food has been swallowed,—these are fruitful sources of flatulence, as well as of other distressing symptoms. Not less mischievous is the rapid bolting of the food itself, which men of business and students are so apt to persevere in. The neglect of regularity in the function of the bowels is another great cause of flatulence; the proper adjustment of diet and regi-



men, favoured, if necessary, by some gentle laxative medicine, should, by those who are apt to suffer, be carefully attended to.

When a severe attack of flatulence has occurred, the patient, no doubt, has at once loosened his clothes, and, so doing, has felt a little relief; let him then take a little of one or other of the following simple medicines—antispasmodics, carminatives, they are called: of these peppermint, as best known for the purpose, may be named first; an ounce (two tablespoonfuls) of peppermint water, or 30 to 40 drops of the spirit of peppermint, or two drops of its oil in warm water, may be given for this purpose. Cardamoms is another favourite remedy; the simple tincture or the compound tincture (containing caraway and cochineal, among other ingredients), in doses of one or two teaspoonfuls, may be given also in warm water. If these remedies are not at hand, a little ginger (5 to 20 grains) may be administered in warm water, or a teaspoonful of its tincture, or a little black pepper (5 grains) after the same fashion. Meantime the application of warm fomentations or a mustard poultice over the belly will be useful; and, after the patient has recovered from the more serious uneasiness, a good prescription is a laxative combined with an anodyne. A full dose (if for an adult, two teaspoonfuls) of Gregory's mixture, with 20 or 25 drops of the solution of the muriate of morphia.

**GALL STONES.** These, which are biliary concretions, by becoming impacted in one or other of the passages or ducts leading from the liver or gall-bladder on the one side to the bowels on the other, give rise to a form of disorder attended by very great suffering. Besides the severe pain in the upper part of the belly, which is spasmodic in character, relaxing for a time in intensity, and, after a brief interval of comparative freedom, again returning in extreme degree, there is much nausea and vomiting of sour matters, hiccough, and, after a time, jaundice (which see, p. 161). The sufferer has, in all probability, for a considerable period previous to the attack, been out of sorts, dyspeptic, with

constipated bowels, wanting appetite, and felt himself unable for any mental exertion.

Severe as the pain is connected with the passage of a gall stone, it is usually, at least in the commencement of such an illness, relieved, to a certain extent, by gentle pressure over the belly; an important sign this is, as distinguishing the spasmodic pain of such attacks from that induced by inflammation, the latter being invariably aggravated by pressure. Neither, in such cases as are now being described, is there usually any true febrile excitement; though shivering may have occurred, the pulse and temperature of the skin remain quite natural. A favourable termination usually takes place after the lapse of some hours: when the gall stone has reached the bowels, all pain subsides.

Further accidents may happen, and a disastrous termination in such cases occur; but it is unnecessary to notice these here. The great object to be kept in view in the treatment of cases resembling that now described, is to relieve or mitigate the extreme pain. This is best done by the continued application of warm fomentations over the belly, and the administration of opium. This remedy is in such circumstances invaluable: it is best given in the form of pill, one or two grains repeatedly (at intervals of an hour or so) while the severe pain lasts. More speedy relief is to be obtained by the subcutaneous injection, according to the method first proposed by Dr. Alexander Wood. The amount injected varies in different cases, 1-6th of a grain of acetate of hydrochlorate of morphia being the ordinary dose. The inhalation of a little chloroform is also a good expedient. The opium may be introduced into the bowels, half a teaspoonful to a teaspoonful of laudanum in a little gruel as an injection, or a suppository containing one-third to one-half grain of muriate of morphia. The patient, in order to relieve the violent retching when it occurs, should be encouraged to drink freely of warm water; or, what is better, as recommended by the late Dr. Prout, warm water containing carbonate of soda in solution, a teaspoonful to the pint of water,—the alkali neutralizes the powerfully acid

secretions of the stomach, and tends greatly to allay the painful vomiting.

Such attacks having once occurred are very prone to return; and the sufferer, in order to meet them, should exercise the greatest possible care in regulating the stomach and bowels; his diet should be simple, and regular passage from the bowels, if possible, always secured.

**GOITRE** (from the Latin *guttur*, the throat), or Bronchocele (the ancient appellation, derived from the Greek), are the names given to an enlarged condition of the thyroid gland (literally, shield-like) situated in the front part of the throat.

In many parts of Switzerland and France this affection is of very frequent occurrence; and in England, from the circumstance of its being more commonly seen in that county than in any other, it has been called the Derbyshire Neck. Goitre is infinitely more common in women than in men; in this country it is very rarely found except in the former.

In the Swiss valleys, where the affection may be said to abound, it is generally found in connection with a peculiar condition of idiocy; there being in the subjects thereof bodily deformity and imperfection, as well as a deficiency, it may be a complete absence, of the mental faculties. To this combined disorder the name of Cretinism has been applied: the afflicted persons themselves are called Cretins.

The inquiry as to the causes of this singular and most distressing disease has long occupied the attention of medical men, and various theories have been advanced in explanation. Some have attributed its occurrence to the use of snow water; indeed, at one time this opinion was very generally entertained. The peculiar condition of the atmosphere in the low-lying Swiss valleys has also been supposed to be the cause of cretinism. Whatever may be the real causes, they are as yet little known or understood. For their determination it will be necessary to take into account the nature of the aliment, of the habitations—in a word, all the physiological conditions of existence of the unfortunate



subjects of the disease. Goitre is not unfrequently found in persons who are suffering from general bloodlessness, at least poverty of blood, or anæmia, as it is called; and when so, an irregular and excited action of the heart, together with a remarkable prominence or staring appearance of the eyes, and occasional attacks of albuminuria, also occur as symptoms. The subjects of this affection are usually young women; but it may occur in persons more advanced in life, and of the male sex.

In the treatment of the simple goitre, unassociated with any marked deviation from health in the system generally, the remedy upon which most reliance has been placed is iodine, used both internally and externally (see Appendix). When the derangement of the general health, already alluded to, exists in connection with the goitre, then such means should be employed as will tend to restore the former; and, in so doing, it is more than probable that the swollen neck will disappear. The remedy of most power in accomplishing this object is iron; which, in the form of one or other of the preparations mentioned in the Appendix, should be given perseveringly for a lengthened time. As irregularity of the menstrual function in females is apt to be found in connection with the state of general derangement, great care must be exercised in avoiding those circumstances which may tend to interfere with its proper occurrence; and whatever contributes to maintain its healthy performance will do good in the general disorder.

**GOUT.** This disease, under the Greek name of *Arthritis*, has long been familiar to physicians; the term *gout*, from the Latin *gutta*, being applied to it in obedience to an old pathological doctrine which ascribed its origin to a drop of acrid matter deposited on the surface of the affected joints.

The disease manifests itself in very different forms, and as modifying various ailments. It is, moreover, a common, and at the same time quite correct expression to employ, as applicable to persons presenting certain sufficiently well-marked characteristics, that they are of a gouty habit or



gouty constitution. Yet such persons may never have suffered an attack of gout.

Acute gout, or what is styled a fit of the gout, generally commences at night with a severe pain in the ball of the great toe, though other joints in the body may be its seat: the part affected soon becomes red and swollen, possessing a glistening appearance, and the pain acquires the lancinating or shooting character. Symptoms of constitutional disturbance either accompany or speedily succeed the local disorder. Such are a quick pulse, increased heat of skin, confined state of the bowels, and urine which, besides possessing a high colour, deposits, after a little time, a sediment more or less dense. While the disease, when assuming the form now briefly described, is liable to be developed without the occurrence of any premonitory symptoms, the more usual course is for the patient to have suffered for some days from derangement of the stomach, with loss of appetite, and other indications of its approach. More particular reference need not be made here to the various forms of gout, or the peculiar sufferings of gouty patients.

Gout is very often an hereditary disease, but it may also be acquired; when so, its more direct causes are luxurious living, and the sedentary habits which so frequently accompany that indulgence. Gout rarely occurs in early life, and most frequently presents itself between the ages of twenty-five and fifty. Men suffer from it in much greater number than women.

The treatment of gout is divisible into two prominent particulars: what is required during the fit, and the suitable management of the patient after its declension or in the intervals of the attacks; for when the disease has once occurred, it manifests a great tendency to return:—

Under the former may be ranked, first of all, rest, specially of the affected part, and the application over it of a piece of flannel dipped in warm water. The patient's food should be of the simplest description during the continuance of the paroxysm, though in many cases, which the judicious physician will not fail to recognize, there is ample room for

modifications, more or less important, in this respect, as well as the administration or total withdrawal of stimulants. The remedy which has been chiefly employed in the treatment of gout, as well as of all forms of gouty ailments, is the meadow-saffron or colchicum. Of it there are several different preparations; and there exists, moreover, considerable diversity of opinion as to the most suitable manner of its administration. It cannot, however, be denied that colchicum exerts a wonderful influence over the different varieties of gout and gouty inflammation. It has, writes Sir Thomas Watson, "the property of easing, in an almost magical manner, the pain of gout." Perhaps the wine of colchicum is the preparation most frequently employed; and in an attack of the disease, it may be administered alone, or with a little magnesia, as a draught at bed-time, and repeated in the morning along with a dose of some laxative. The dose of the wine of colchicum in such circumstances, for an adult, should not exceed thirty or forty drops; it may thus be continued for several successive days. Usually the attack of the disease does not last more than a few days.

It is by careful attention to diet and regimen that, during the intervals of the paroxysmal attacks of gout, the patient is to be treated. No precise rules applicable to all sufferers can be laid down; but while temperance in the use of, if not abstinence from, fermented liquors should be practised by the great majority, it is specially incumbent upon those whose general health has not as yet been damaged by repeated attacks of the disease. Some sufferers from gout there are who, having long indulged, positively require their accustomed stimulation, and if altogether deprived thereof would the more certainly be attacked. Exercise is good for all except the thoroughly debilitated; but even in the case of the young and strong, it should not be so great as to be followed by much fatigue. The bowels, if they tend to be confined, should be carefully regulated; and for this purpose no means are better than small doses of rhubarb (10 grains) and bi-carbonate of potash (15 grains). Let attention

be further paid to the condition of the skin,—to maintain its ready transpiration is of great importance. Lastly, as regards diet, all articles of food should be selected from their being as readily as possible digestible. White fish and white flesh,—as of fowl, rabbit, and such like,—if they do not form the entire, should certainly constitute the staple commodities. Sherry wine, and the lighter German wines when quite sound, as Hoc and Moselle, which increase the elimination by the kidneys, are preferable to port and burgundy, and, generally speaking, also to claret.

Gout, as is well known, is apt to attack internal organs, and specially the stomach: when so, the patient experiences violent pain, with sickness, and a sensation of great faintness. This is often a formidable, not unfrequently it is a fatal, form of the gout. If it turn out, upon inquiry, that some indigestible article of food has been recently taken, it is always well in such circumstances to exhibit an emetic; and after its operation, or without its administration, if the stomach be supposed to be at the time free from any deleterious substance, a glass of warm brandy and water, either alone or with the addition of thirty, or thereby, drops of laudanum, should be given. Attempts, which are sometimes successful, may also be made to determine the gout to a less dangerous locality, as the feet, by covering them with mustard poultices, or placing them in a hot bath. If great pain in the stomach come on without the sense of faintness and the cold surface with feeble pulse, then possibly a dose of magnesia, alone or with rhubarb powder, or of bi-carbonate of potash, may relieve the pain, and render further interference unnecessary.

**GRAVEL.** The term “fit of the gravel” is applied to that assemblage of symptoms which is produced by the passage of a urinary concretion. In the popular acceptation, “gravel” usually means the deposit of a brick-dust appearance (uric acid), which is not unfrequently found in the urine.

The symptoms which indicate irritation of the urinary

organs produced by gravel or the passage of a calculus, are a sense of shivering, followed by pain in the loins, generally felt more severely on one side, and passing downwards in the direction of the bladder; a frequent desire to make water, which is either passed in small quantity, perhaps containing blood, or for a time not passed at all. If these symptoms continue, and are very severe, usually great sickness and vomiting also occur. When, in addition to these, there is marked fever, as indicated by frequency of the pulse and heat of skin, the probability is that the kidney has become the seat of inflammation. The pain which is experienced in the fit of the gravel is often suddenly relieved; an indication that is of the concretion having passed through the narrow communication between the kidney and bladder (the ureter), and having entered the latter organ. The time which elapses during the progress of a concretion from the kidney to the bladder varies very greatly; the transit may be accomplished in a few hours, or it may last as many days.

In the treatment of a fit of the gravel, when unaccompanied by febrile excitement, it is advisable, in the first instance, to administer a purgative: if the irritability of the stomach does not prevent the exhibition of medicine by the mouth, a dose of calomel (5 grains) may be given for this purpose, or if otherwise, a purgative enema; then opium, in the form of pill (1 or 2 grains), by the mouth, or introduced by way of injection under the skin, or as a suppository (half a grain of muriate of morphia) into the bowel, may be administered in order to relieve the severe pain. The warm bath, hot fomentations over the seat of pain, drinking freely of diluents (barley-water), and the injection of warm water into the bowels, are most useful adjuncts in treatment, and if the pain prove lasting should not be neglected. When, in addition to the symptoms already named, there is fever present, it may be found necessary to take blood: this is best done by cupping over the loins,—an expedient which, in many cases, is speedily followed by marked relief.



**HAY-ASTHMA.** The affection which passes under this name, as well as that of hay-fever, is remarkable in two respects: it is incident to certain individuals only, and to these at a particular season of the year,—during the months of May and June, as hay-making is going on. It seems to be produced by the emanation from certain species of grass in flower at that season, which tells injuriously upon those persons who have a strange susceptibility to its influence.\*

The symptoms of the affection are sneezing; water running from eyes and nose; much headache, chiefly frontal; and very generally, though not constantly, symptoms referable to the chest,—cough, difficulty of breathing, occurring in paroxysms, and accompanied by wheezing sound. These phenomena are all produced by a condition of the mucous membrane of the air-passages, extending through the nostrils downwards, similar to what exists in ordinary cases of nasal and pulmonary catarrh.

The liability to be affected in the manner now described seems to be in some instances hereditary, as Dr. Elliotson of London and others have pointed out. A remarkable feature of the affection is, that persons who suffer from it are not subject in any degree to catarrhal attacks at other times, and excited in the ordinary way, as by exposure to cold.

So strong is the susceptibility in some individuals, that they are compelled, in order to avoid the occurrence of an attack, to shun the country altogether during the hay season; with the majority, however, of those who are apt to be affected, it is only necessary that the fields and meadows of hay should be avoided. It is well known that a somewhat similar effect is produced in certain individuals by the emanation from the powder of ipecacuanha, even in very limited amount; and numerous occurrences of a like nature with it might be referred to. An asthmatic attack, for example, is occasioned in some by the mere handling of straw; such persons dare not attempt to pack a box with straw, lest they should, by so doing, induce a sense of con-

\* The particular grass is the *anthoxanthum odoratum*, the sweet-scented vernal grass, and the irritation is due to the pollen.

striction over the chest, followed by cough and difficulty of breathing.

Hay-asthma, though often a troublesome, is never a dangerous complaint. As regards treatment, it will be readily understood that removal from the source of the irritation is the most efficacious; and this, in the case of persons who can suit their residence to the requirements of health, is the principal, as it cannot fail to be the most useful prescription. But though formerly supposed to be an affection which selected dukes and princes of the blood royal, and the lesser nobility, as its subjects, it is now well known that hay-asthma is not so dainty in its choice, and persons affected by it may belong to that rank of life which precludes the possibility of change of air being enjoyed by them at the required season. Fortunately, in such circumstances, there are remedies which serve the purpose of fortifying the patient against his troublesome complaint. Quinine and iron, alone or in combination, are useful; and the bracing measure of daily sponging the chest with cold water should be adopted. The medicines which have been employed with most benefit during the attacks of the disease are, chlorine, in the form of vapour, by inhalation; the tincture of *nux vomica*, of which twenty or thirty drops may be taken by adults three or four times daily; the tincture of *lobelia*, the dose of which is a teaspoonful at intervals, for two or three times. In some chronic cases, much benefit has been experienced from the employment of arsenic: it should be administered in the form of Fowler's solution, five drops thrice daily after meals.

Those who are apt to suffer, and nevertheless must work among the grass or new hay, should, while so employed, wear the respirator which, in addition to the mouth protector, is furnished with the perforated plate for the nostrils.

**HEADACHE.** Though it is not a very uncommon circumstance to hear the exclamation from the lips of the invalid as well as the person who enjoys uninterrupted health, "I do not know what it is to have a headache," the great

variety of uneasy and painful sensations in the head, which are to be included under the one term Headache, are unquestionably but too familiar to the great majority of mankind.

Headache occurs as one of the most frequent symptoms of various diseases. All affections of the brain cause it, though some in an infinitely more severe form—and some presenting certain special peculiarities—than others. It is present, in a more or less marked degree, at one time or another, in the course of all the febrile affections: many of these are, indeed, ushered in by headache; so is it always in continued fever. Again, it is commonly found in connection with the general blood disorders: in rheumatism and gout, and certain diseases of the kidneys, when the blood remains unfreed from the impurities which it is the function of these organs to remove; when there is also fulness of blood, and when the opposite condition or impoverishment obtains, the blood in these cases being altered in amount, but not containing an impurity. Headache is one of the most common symptoms of stomach and biliary disorder; it is determined by constipation in the bowels, and is indeed to be found in connection with the functional derangement of almost every organ in the body.

But besides its occurrence as a symptom in many different ailments, headache may and often does exist as an independent affection; when so, it is extremely variable in regard to its duration and recurrence, as well as its manner of attack. It is often connected with mental depression, and with inability to exercise the powers of either mind or body. In some instances it assumes a periodic character—a variety of headache which has already been alluded to under the name of *Brow Ague* (p. 20). The relation of this form of headache—which is frequently called nervous headache—to sleep is various: at times sleep is altogether prevented; more usually, however, the headache is terminated by repose.

It is of great importance, in the treatment of nervous headache, to determine, if possible, the cause upon which it depends: whether, for example, it be connected with derangement in the stomach, liver, or bowels; because, by

removing the latter, the headache is most effectually alleviated. Sedentary habits, and the too free indulgence in smoking tobacco, or in drinking strong tea and coffee, will not unfrequently be found in the cases of those who suffer much from headache. In such circumstances the appropriate remedy is at once suggested: the application of cold to the head, perfect quiet and rest, in the recumbent posture, in a darkened room, with the head slightly raised, should, while it lasts, be enjoined as the most likely means of alleviating the pain.

**HEARTBURN** is the very uneasy and often extremely painful sensation which, taking its origin in the stomach, becomes diffused over the chest, and specially concentrated in the region of the heart. It is the indication of irritation in the mucous membrane of the stomach, and occurs as one of the most common symptoms of indigestion, as well as of inflammatory affections of that organ.

Very frequently heartburn is caused by acidity, and is relieved by anti-acid remedies: of these magnesia, in doses of 10 to 15 grains, and bismuth in similar doses, dissolved in a little milk, are the best; they should be administered a short time before meals; or, if the heartburn does not come on till digestion is near completion, the remedy may be given with best effect a little time after food has been taken.

Those who are apt to suffer from heartburn should exercise great caution in the selection of articles of diet, avoiding all such as, in their individual experience, tend to create acidity, or any of the other symptoms of impaired digestion, with which it is so often associated; they should also endeavour carefully to regulate the function of the bowels.

**HEART COMPLAINT.** Diseases affecting the heart, the central organ of the circulation, are of very common occurrence, while they also differ very considerably in their nature. It is customary to speak of these under the two heads of functional and organic diseases: the former embracing those in which the action of the organ is merely



affected, while under the latter are classed all those cardiac diseases in which some change or other has taken place in one or other part of the organ. What should always be remembered, particularly in connection with the former, is that long-continued functional derangement is very prone to terminate in organic disease. The heart, moreover, may be primarily affected, or it may become involved owing to the occurrence of disease in other organs; the lungs, for example, the kidneys, and the liver. In its turn, too, the heart, when diseased, gives rise to various disorders in other organs—in those which have been named as well as in the brain; while dropsy, as already mentioned under that head (p. 100), is the common consequence of cardiac diseases.

The symptoms which indicate affections of the heart are very various, and differ considerably, according as the organ is in its structure, or only in its function, deranged. Many of the more prominent symptoms are, however, common to these two forms of ailment. The violent action of the heart, or palpitation, is one of these; and so is the feeling of uneasiness, sometimes of actual pain, which for the most part accompanies it. There are certain general disorders which are frequently found in connection with disease of the heart; of these rheumatism is the chief: this disease, when assuming the acute form,—what is known under the name of rheumatic fever,—may be regarded as the most common cause of heart complaint. In such circumstances the heart, either in its investing membrane (pericardium) or its lining membrane (endocardium), becomes involved; and, owing to the inflammation in the latter case attacking those delicate structures which are denominated the valves of the heart, the integrity of the circulation becomes variously destroyed, and the most serious consequences result.

Besides the affections now briefly referred to, the heart is liable to undergo enlargement; and this may be due to thickening of its walls, or to increase in the size of its chambers, or to both. A decrease in the thickness, with alteration in the structure and diminution in the power of

the walls of the heart, is also of very frequent occurrence, specially in advanced life, entailing various symptoms, which more or less plainly indicate its feebleness.

Those aids to diagnosis which have already received a short notice—auscultation and percussion (see pp. 55, 56)—will always be employed by the well-informed physician in his endeavour to determine the precise nature of all cardiac affections.

In aiming to prevent the occurrence, as well as to arrest the progress, of cardiac affections other than those which are inflammatory in their nature, and the treatment of which will be briefly noticed under the head of *Rheumatism* (p. 183), it cannot be too anxiously remembered that all causes which tend to hurry the circulation are liable to do harm. These may be very different in their nature; the most common are violent or immoderate exercise or muscular exertion, as in lifting a very heavy weight,—to the last mentioned is the first establishment of disease of the heart not very unfrequently to be traced,—and mental emotions, whether of anxiety, or grief, or such like. On the other hand, everything which tends to soothe the circulation and moderate the action of the heart may be regarded as beneficial. In some instances of particular cardiac ailments the heart's action is feeble; these often require the employment of stimulants, or such remedies as tend to increase rather than diminish its movements. Very important is it, also, in the management of cases of heart complaint, to endeavour as much as possible to keep in natural and healthy exercise the other functions of the body, specially those of digestion and assimilation of the food. Under the heads of *Palpitation* (p. 176), *Spitting of Blood* (p. 206), &c., will be found certain observations respecting the treatment of these symptoms as they occur in the course of cardiac diseases; for cases of heart complaint vary so much in their intimate nature, their origin, their degrees of severity, their consequences, as to render it impossible to write in anything like general terms of the means which may be most effectually employed for their relief.

**HICCOUGH**, which, properly speaking, is merely a symptom, occurs very frequently without any evident trace of other affections. It consists of instantaneous short and convulsive inspirations, accompanied by a peculiar sound, which is originated in the upper part of the air-passages, and followed by an immediate expiration. When very violent, which it is not unapt to be, hiccough is very painful. Ordinarily, the uneasiness it occasions is experienced in the lower and front part of the chest, corresponding to the midriff or diaphragm, which is the seat of a spasmodic contraction; but when very severe, a sensation of great discomfort, and even of actual pain, may be felt in the belly generally, and throughout the entire frame

The attacks of hiccough succeeding each other at nearly regular intervals, usually subside in the course of a few minutes; but they may continue to recur with less regularity for hours and days. When the latter occurs, it is generally found that the convulsive disorder co-exists with some sufficiently well-marked derangement of the general system; specially has it been noticed in connection with gout.

Hiccough is prone to occur as a complication, and at times, from its exhausting character, a serious one, of various diseases, chiefly of fevers, and affections of the liver and lungs. In its ordinary form, as an occasional ailment from which at one time or other few do not suffer, though many persons seem peculiarly subject to it, hiccough is dependent on some disorder of the stomach, induced usually by such causes as flatulence, emptiness, or repletion, or by taking some indigestible article of food.

For its relief, when it has occurred in the manner now described, some simple expedient is alone often successful—such as taking a very deep breath, and then holding it in as long as possible, so as to keep the diaphragm, for the time, at rest. A sudden start, a blow on the back, or pain experienced in another part of the body, frequently operate in checking the complaint; so does a draught of cold water. When the spasmodic affection is found accompanying fevers or other diseases, it may be necessary to employ other

remedies: of these, the most beneficial are bismuth, peppermint, camphor, sal volatile, ice, chloroform, hydrocyanic acid, creasote (see Appendix). When hiccough occurs in persons of gouty habit, special care must be taken to regulate the diet and regimen in the manner most likely to remove the cause upon which the spasmodic affection depends.

**HOOPING-COUGH** is well described by Cullen as a contagious disease, accompanied by convulsive choking cough, noisy and quickened breathing, and oftentimes vomiting. It is specially a disease of early childhood; thus, of 130 children affected by it, M. Blache found 106 under the age of seven years, and 24 only between seven and fourteen. Hooping-cough is, in fact, one of the diseases from which the generality of persons in our climate suffer when young; the predisposition to it is so strong that comparatively few pass through childhood without having suffered from it. If they have so passed, then the predisposition is very greatly diminished, though the disease may occur at any period of life.

Female children appear to suffer more frequently than those of the other sex. Joseph Frank, a learned physician, M. Blache, and others, have found it so. Dr. West of London observed in the Children's Infirmary, that of 100 cases 55·3 per cent. were females, 44·7 per cent. males. The disease seems to prove more fatal to girls than boys, in the proportion of 3 to 2.

The infectious character of hooping-cough has been demonstrated by numerous facts, and is, indeed, almost unquestioned. But though undoubtedly infectious, there may reasonably exist a difference of opinion as to the particular period of the disease when the infection is capable; or, if it be contended, as by some, that hooping-cough during its whole course is infectious, at what time or stage of the disease infection is most prone to occur. That opinion is probably the correct one which regards the disease as infectious throughout its whole course, though chiefly so at the period of its greatest development. But hooping-cough



may not only be communicated from the sick directly to the sound, it may be so by means of fomites (from *fomes*, literally touchwood, tinder)—that is, by articles of dress, bed-clothes, or such like, which have been in contact with the affected. Rosen, a distinguished physician, asserts that, without being at the time at all aware of it, he must frequently have carried the disease from house to house with him. Frank makes a similar observation: “*Propagatur enim sæpe per ipsos medicos, morbus, de ægro ad ægrum, de domo ad domum, de pago ad pagum.*”

Occasionally hooping-cough prevails in an epidemic form; at other times the characters of an epidemic are not clearly discernible, yet the cases are numerous. Often the disease is evidently not epidemic: the instances which are met with, under such circumstances rare and isolated, are properly termed sporadic.

There are three stages of hooping-cough: the first, that of development, or catarrhal period; the second, of confirmation of the disease, or spasmodic period; the third, the stage of declension, or period of amendment. But the disease differs very greatly in its degrees of intensity, both in its epidemic form and when merely scattered cases are occurring; for this reason it has been customary to speak of a mild and a severe hooping-cough.

In the great majority of instances hooping-cough commences just as a common catarrh, and there is nothing to distinguish it from an ordinary cold. The duration of this, the first stage of the disease, is variable: it may exist only for a day, generally it lasts for a week or two.

The changes which mark the accession of the second stage chiefly relate to the cough: by degrees it has grown louder, and has come to last longer; has, moreover, acquired a suffocative character, and shown a marked tendency to evening or nightly exacerbations. With the cough a little viscid phlegm is usually expectorated. Very generally the first decided hooping cough is made at night. The paroxysmal nature of the cough becomes more and more apparent, the fits of coughing more and more frequent in their recurrence.

As these take place, the child becomes nervous and timid, runs to its mother, the nurse, or nearest friend, and often buries its head in her lap; its face, during each successive fit of coughing, becomes red and congested, and the spectator readily sees the shock which the whole system of the child thereby sustains. A succession of short and rapidly repeated expiratory efforts, performed, too, with great force, distinguish the cough; and, as the act of inspiration is meantime hardly performed, if performed at all, the lungs are virtually emptied of air. Thus the child, for a few moments,—it usually *seems* a longer time,—is almost suffocated. A long loud inspiration follows and ends this condition; the paroxysm terminates, at least momentarily, perhaps ceases; and the threatened suffocation is thereby averted. This noisy inspiration is the hoop; this it is that gives the disease at once its distinctive character and its name. While the change in the cough has occurred, a marked abatement in the catarrhal symptoms which distinguished the earlier or first stage has taken place, and the febrile symptoms which accompanied it have probably also disappeared. Though the peculiar sound or hoop, as now described, is highly characteristic and general in its occurrence, it is not invariably present. Cases are familiar to all physicians in which the second stage of the disease has been reached, the violent cough, paroxysmal in its nature, and composed of the forcible expiratory efforts, plainly testifying to its reality, being present, yet unaccompanied by the hoop, or, as it is popularly called in this country, the “backdraw.” These, however, are exceptional cases, just as those are in which, on the other hand, the very first, as well as every subsequent cough, is accompanied by the hoop. At the commencement of the spasmodic stage, the attacks of paroxysmal cough are usually short, and separated by intervals of considerable length; but after a time, in some instances as short as a week, in others it may be a little longer, these become more severe, more suffocating in character, accompanied by more frequent hoops, and very often by the vomiting of food. When these features of the complaint have become marked,

then the disease is to be regarded as fully established ; it has reached its height, or the *acmes morbi*.

From the first occurrence of the spasmodic character of the cough, up to the period now mentioned—in other words, usually for ten days or a fortnight—the disease goes on increasing in severity, specially the attacks of cough continue to recur with increasing rapidity ; then for a similar period, or perhaps a little longer time, the disease seems stationary. During this time there occurs neither increase nor diminution in the frequency or severity of the paroxysmal attacks. After its lapse there is a visible amendment ; and there are two ways in which this may be first noticed : either by a reduction in the number of the coughs, specially their occurrence during the night, or,—and this is the way in which amendment for the most part shows itself,—by a reduction in the severity of the attacks. The commencement of the third stage, or declension of the disease, may be said to date from the time when one or other of the events or changes noticed has occurred. The patient is then virtually a convalescent, recovery having begun. This stage, however, may, and very often does, prove tedious. Weeks may elapse before the cough, even what is peculiar about it, has ceased ; but generally the child is able to eat, and, as its night's rest is not then so interrupted, to awake from sleep refreshed. During the third stage there still remains much need for caution. When manifestly on the decline, any act of imprudence, such as exposure to cold or damp, neglect of the bowels, even mental excitement, may suffice to bring back the complaint, to re-establish the hoop, it may be weeks after it has disappeared.

Hooping-cough, like measles, scarlatina, and typhus fever, as a general rule, attacks the same person only once ; the exceptions to it, indeed, as regards hooping-cough, are fewer than in the other affections named, dependent, no doubt, upon the circumstance that the former is essentially a disease of childhood. M. Blache records an instance of a grandfather and grandmother taking hooping-cough a second time from their grandchildren, when the whole party became affected at the same time.



Though hooping-cough usually runs its course as a simple and independent disorder, it is not unapt to be attended by various complications. The most important of these may be divided under three heads: those affecting the organs of respiration, those affecting the nervous system, and those affecting the intestinal canal. Of the first the chief are bronchitis and inflammation of the lungs; of the second, convulsions, congestion of and water in the brain; of the third, diarrhœa. The risk of the occurrence of these serious complications is not limited to any one period of the disease. On the contrary, from the commencement of hooping-cough almost to its close—and who shall say how severe or mild the case may be?—any one of them may occur; while the judicious physician will always be on his guard, lest the occurrence of bronchitis, or convulsions, or diarrhœa, change a case, previously causing no great anxiety, into one of very great and necessary alarm.

The establishment of one or other of these complications, and specially those of the second class, will be found to be intimately connected with the previous history, constitutional predisposition, age, &c., of the child affected. Certainly a little patient who has previously suffered from fits, who has inherited the scrofulous constitution, or is at the very time teething perhaps with difficulty, runs a greater risk than a child who has not ailed before, who is free from any constitutional taint, and has passed through the early trial of dentition. How important the complications are, and intimately connected with the favourable or unfavourable termination of different cases, is evident from the fact that a great amount of the suffering, and almost all the danger, depend not so much upon hooping-cough itself as upon these very complications.

Besides the affections already alluded to, which rank under the head of complications, hooping-cough is very frequently found in close relation with measles and chicken-pox; children pass through each of these ailments one after the other.

Regarding the treatment of hooping-cough, a few observations must now be made. There is no specific remedy in this



disease, so that the main object to be aimed at is to keep it simple, by great care and the use of certain medicines, to prevent, if possible, the occurrence of any of the complications. Throughout the disease, the child should be kept in a well-aired room or rooms, the temperature of which is not allowed to fall below sixty degrees Fahrenheit. At the commencement of the attack, or during the catarrhal stage, such expectorant medicines as a little antimonial or ipecacuanha wine may be from time to time administered. When the spasmodic stage is reached, then something may be effected by soothing measures. Dr. West speaks highly of diluted hydrocyanic acid, which must of course be administered with great caution: half a drop may be given, in the first instance, to a child of nine months old, every six hours, and then the dose may be gradually increased to one drop every four hours. Great benefit often follows the use of the bromides of ammonium and potassium. A small dose of Dover's powder (one grain for a child of one year), or the extract of conium (half a grain for a child of one year) may be employed for the same purpose. Emetics often do good; and there are many practitioners who not only uniformly commence the treatment of a case by the exhibition of antimonial or ipecacuanha wine so as to produce vomiting, but repeat the remedies from time to time, as the disease progresses. If there be much wheezing during the intervals of the coughs, the emetic is likely to do good. In the Appendix will be found some further prescriptions useful in whooping-cough. Of external applications, or rubefacients, as they are called, the best are Roche's embrocation and Dr. Bow's liniment, or a mixture of hartshorn and eau-de-cologne. During the whole course of the disease, it is proper to rub the chest both before and behind with one or other. When the disease has reached its acme and begun to decline, it is often remarkable how speedily convalescence progresses under the influence of a suitable change of air; and, at the same time, various tonic remedies, such as the steel wine, or other preparations of iron, aid complete recovery.

Every case of whooping-cough should be carefully watched,

specially, however, such as occur in children of scrofulous or otherwise unhealthy constitution. When chest complications—and of these bronchitis is both the most common and the most hazardous—supervene, the required treatment will necessarily depend upon the precise condition of the child: if still strong, then depressing measures may be had recourse to, as blood-letting by leeches, applied over the breast-bone, or to the feet; and afterwards a little tartar emetic in solution may be administered. If, on the other hand, the child appears sunk, with the pulse feeble, such remedies are inadmissible, and those of a stimulant nature are required, such as ammonia and wine. The former, along with a little infusion of senega, may be given to a young child, as the sesquicarbonate, in doses of one or two grains frequently repeated. When head symptoms come on, the warm bath, mustard applied to the feet, perhaps one or two leeches to the temples, and purgative doses of calomel, are the chief remedies. When diarrhoea occurs as a complication, such astringents as chalk mixture and lime water may be freely used, and a drop of solution of muriate of morphia or laudanum added occasionally.

**HYSTERIA**, from the Greek word *hustera*, the womb, the disease having received this name from its supposed seat in that organ. Hysteria depends on a morbidly excited condition of the nervous system, and is characterized by the occurrence of occasional convulsive attacks, the so-called hysterical paroxysm, or simply hysterics, and by an innumerable variety of functional disorders connected with all parts of the body. The hysterical paroxysm or fit is almost entirely confined to the female sex.

The approach of the fit is very generally announced by a peculiar sensation experienced in the throat, like a ball rising from the stomach, which is called the *globus hystericus*; a general agitation of the whole frame succeeds; and the patient, uttering a scream, sinks down to the ground or falls, the limbs and trunk being convulsively moved from side to side. In very severe cases, consciousness, as in the epileptic

paroxysm, is lost, but in many hysterical fits it is only blunted for the moment. The duration of this condition varies extremely; it may pass away in a few minutes, or last for many hours, or even days. When it does subside, the patient usually bursts into laughter or tears, and then falls into a quiet sleep, and gradually returns to a healthy state. Very commonly there follows a very copious discharge of pale-coloured urine. Though such as now briefly described is the most common form of the hysterical fit, it is liable to great variations. In one case, the loss of consciousness and the convulsive movements of the limbs are very marked; in another, the patient falls into a quiet, deep sleep, from which the loudest sound and violence applied fail to rouse her.

The treatment of hysteria involves what is requisite during the paroxysm, and what is likely to benefit the deranged condition of the general nervous system. During the fit, care is to be taken that the patient does not injure herself. The dress should be loosened, and fresh cool air, if possible, freely admitted. If the patient be able to swallow, then a teaspoonful of the ammoniated tincture of valerian may be administered in some camphor mixture. When, on the other hand, the patient cannot be got to swallow a draught, an enema containing valerian or assafoetida should be given, and cold water dashed freely over the face. In the endeavour to correct the morbid state of the system on which the hysterical paroxysms depend, it must always be remembered that an unhealthy condition of the special female functions is most intimately connected with their occurrence. Regularity in the respect now adverted to, and as regards the function of the bowels also, which is generally much disordered, are to be diligently aimed at. Besides this, all those means, whether by regimen, diet, or medicines, which tend to brace the nervous system, are likely to be beneficial. The cold or tepid shower-bath; inhabiting well-aired apartments; the avoidance of late hours; going early to bed, and rising early therefrom; the proper exercise of the mind, without any mental excitement; these are the points to at-

tend to. It is by attention to these that the removal of the affection is most apt to be accomplished.

**INDIGESTION**—in medical language *Dyspepsia*; literally, difficult digestion—is one of the most common of all ailments, while it is apt to assume many different forms, marked by the predominance of one or more symptoms. The chief characters of indigestion are, alteration of the appetite, which may undergo a partial or complete loss, or, on the other hand, be morbidly craving and greedy or capricious and irregular; sickness and vomiting; flatulence; pain; water-brash. Apart from these, which may be called the local symptoms, there are others often very painful and difficult to relieve; such are headache, palpitation of the heart, constipation, and mental depression.

In the treatment of indigestion much good may sometimes be effected by giving attention to certain simple rules of diet. The amount of food taken at any one time should never be excessive,—on the contrary, it should be uniformly restricted; a regular interval should always be permitted to intervene between meals; and in the selection of articles of food, the greatest care should be taken that what is most easily digested is preferred (see *Diet*, p. 242). Sedentary habits, and too much mental application, are to be avoided as much as possible, as these tend greatly to favour the occurrence of dyspepsia. Under particular heads, as *Constipation* (p. 44), *Diarrhœa* (p. 92), *Flatulence* (p. 122), *Vomiting* (p. 220), &c., reference is made to some of the special points of treatment in indigestion. Loss of appetite, which is in some cases the only symptom present, is often remedied by the exhibition of one or other of the following favourite medicines: columbo, quassia, gentian, quinine (see in Appendix).

**INFLAMMATION.** A very large majority of the diseases to which the body is subject are connected with that peculiar and complex morbid process to which the name of Inflammation is given. There is no organ or struc-



ture in the body which may not become affected by inflammation, while there are many which, owing to particular circumstances, very frequently become its seat.

When an external part—as, for example, the skin—becomes affected with inflammation, its existence is recognized by the presence of certain symptoms: these are four in number—pain, redness, heat, and swelling. These are the distinguishing features of all inflammations; but, as the general indications of inflammatory action, they vary very greatly according to the exact seat of the inflammation; while the first of them, pain, is apt to be more severely felt by some patients than by others, owing to their natural susceptibilities.

It is customary to speak of acute and chronic inflammation, the former being characterized by a much more speedy course, and by more marked local as well as general disturbance.

The existence of inflammation in the hidden parts of the body is determined by the occurrence of certain local and general symptoms: of the latter—and, from being general, the more universal—increased heat of skin and quickening of the pulse (which, in particular inflammations, is, moreover, apt to be peculiarly altered, becoming full and hard) are the chief; of the former, pain, accompanied by tenderness when pressure is made, is the most important. According as the inflammation is seated in one or other organ or part of the body, will the special local symptoms be diversified. If, for example, the lung be inflamed, there will be some degree—varying very much in intensity, according to various circumstances—of difficulty of breathing, cough, and expectoration. What is spat up generally contains blood in a form which gives a rusty appearance to it; and this is one of the most important of all the indications of the disease. Pain, or at least uneasiness, in the affected part of the chest, will be experienced; this symptom, too, is liable to alteration, according to particular circumstances. In the discovery of the existence of inflammation in the lungs, the physician receives the greatest assistance from the employ-

ment of the stethoscope, and those other aids which have been alluded to. In inflammation of the bowels or their investing membrane (peritoneum) there is pain, specially in the latter case, greatly increased by pressure: the patient lies on the back with the knees drawn up, and breathes entirely with the chest. All movement in respiration of the belly is stayed. Vomiting, and a confined state of the bowels, are also indications. In these two cases the local symptoms direct attention to the precise seat of the disease, while those in connection with the general system indicate their true nature as being inflammatory.

There is no class of diseases in which the natural tendency to a favourable termination can be more distinctly observed than in those of an inflammatory nature; the great object, therefore, to be kept in view in their treatment is to place the patient in those circumstances in which the curative powers of nature will the most readily be exercised and run the least risk of being thwarted. Very specially is the great function of the circulation connected with the peculiar phenomena which constitute inflammation; its tranquillity should therefore, as far as possible, be secured. The pulse is quickened and otherwise altered in inflammation; rest of body, as well as of mind, must be enforced, for otherwise the hurried circulation will not only be maintained but aggravated. When an important part of the body is affected by inflammation, the patient should always be confined to bed. Such restriction is not absolutely necessary in the instance of inflammation in those parts of the body for which rest can otherwise be readily secured, even though the amount of constitutional disturbance be considerable. For example, in inflammation of an eye, or of a gland in the neck, complete rest and the avoidance of all fresh exciting causes may possibly be attained without confinement to bed. But besides enjoining rest, the physician, in such circumstances as those now under consideration, further favours the curative operations of nature by securing the total avoidance of those articles of diet which are likely to prove of too stimulating a nature. Cold, and heat, and

light, are, moreover, under his directions, tempered. In a well-regulated temperature, between sixty and sixty-five degrees of Fahrenheit, the great majority of inflammatory ailments are best treated.

Of particular remedies, which the experience of physicians in all ages has proved to be most extensively useful in the treatment of inflammation, blood-letting undoubtedly occupies the chief place. But recourse to the lancet, or even to local blood-letting by cupping or leeches, is not to be considered as necessary in all cases of inflammation; very far from it: there are many cases which, so far from being benefited by such practice, would undoubtedly be very seriously aggravated. Before employing blood-letting in any particular case of any particular inflammation, the judicious physician will always consider certain circumstances in his patient's condition: these include the age and the constitution or habit of body of the individual, as well as the prevailing character of diseases at the time, whether they be of the sthenic or asthenic type; in other words, whether such be attended by a decided increase or by as remarkable a decrease of vital energy in those affected. Again: the experience of physicians in all ages has confirmed the opinion that the employment of blood-letting should be limited to the very early periods of inflammatory affections. Another circumstance by which the physician is guided in his determination to take blood is the character of the pulse. Though apt to be variously altered, it may be stated that a pulse which is full and hard indicates the propriety of bleeding; while, on the other hand, a pulse which is small and soft, easily extinguished by pressure, indicates that bleeding, if practised, will not be well borne. The ancient physicians were further in the habit of determining doubtful cases from the appearance presented by the blood as it flowed; and in more recent times the fact of certain characters of the blood being present has, to a limited extent, been considered as a justification of the performance of blood-letting.

The other remedies chiefly employed in the treatment of



inflammatory diseases are mercury, antimony (specially in inflammations of the chest), and opium; the last chiefly in inflammations seated in the belly. These are all powerful medicines, only to be used with the greatest care and circumspection; but, judiciously employed, they are also singularly efficacious, so much so as to have commanded the confidence of the wisest and best physicians for many long years. Besides these, there are other remedies less generally applicable, but nevertheless oftentimes available, in the treatment of special inflammations; for example, aconite, and digitalis, and colchicum—the last in gouty inflammation. There are, besides, certain operations on the system, the production of which is eminently useful in the treatment of inflammatory affections generally speaking. Such are free action of the bowels, induced by purgatives; sensible perspiration, effected by sudorifics or diaphoretics; increased flow of urine, determined by diuretics.

What must always be borne in mind in regard to the treatment of inflammations is, that cases vary extremely in their intimate nature, as well as the external circumstances of each. The agricultural labourer of robust frame, and, up to the time of his attack, in vigorous health, demands a very different treatment from the enfeebled denizen of a populous town, though both are affected with precisely the same disease. Another particular, never to be lost sight of, is, that Nature herself, in numberless instances, is fully equal to the treatment of inflammatory affections; in many such, unaided, she accomplishes a cure,—facts which no intelligent physician will call in question, and which fully account for the recoveries even in the hands of certain busybodies, who would fain attribute the favourable results to their own often worse than useless machinations. But though a meddlesome interference with the operations of Nature cannot be too strongly denounced, physicians have abundant reason to conclude that their timely and judicious assistance, in very many instances of inflammatory ailments, is required, and proves extensively useful. This may be in the way of administering depressing, perhaps of exhibiting stimulating,



remedies—and these latter are often serviceable in inflammations; or it may be only to the extent of seeing that Nature herself gets fair play, and that no ill-judged activity defeats her beneficent purposes.

**INFLUENZA**, or Epidemic Catarrh. This is a general febrile disease, accompanied by inflammatory action in the mucous membrane of the air-passages, and occurring epidemically. The term *Influenza*—literally, the influence—is Italian, though now it is an English word.

The first epidemic of influenza of which there exists any distinct medical record, occurred in the commencement of the sixteenth century. In 1557 another epidemic spread not only over Europe, but also over the whole of the northern hemisphere. Beginning in Asia, it extended westward over the European continent, and reached to America, where it terminated. Since that time numerous epidemic outbreaks of the disease have occurred, not at regular periods; indeed, quite the contrary: for while in some instances it recommenced in two or three years after its previous disappearance, in others an interval of seven, ten, or even twenty years has elapsed. Again: as has been observed in regard to the history of other epidemic diseases, the progress of influenza has been by no means uniform. Commencing in Russia, influenza has passed westward through Poland and Germany; afterwards crossed into Britain; and then, turning again, proceeded in an easterly and south-easterly direction through France, Spain, and Italy. On other occasions, entering Europe through Italy, it has passed through France and Spain, then gained England, and thereafter often diffused itself over the northern parts of Europe, including Russia. Influenza, in its progress, is not interrupted by oceans or seas; prevailing in England, its appearance may soon be heard of in the New World beyond the Atlantic. It visits, like cholera and other epidemic diseases, the habitations of man, no matter how remote or far removed from human intercourse they be,—islands in the midst of the ocean, where ships seldom touch;

it attacks crews of vessels which have long left the shore, and who for weeks together have enjoyed no opportunity of seeing others than their own ship's company.

During the epidemic prevalence of influenza, it is not only those who are actually suffering from it who may be said to be affected by its influence,—the healthy feel its operation to a certain extent; and, in a sense of general lassitude and depression (which may be forerunners—they are not always so—of an attack), that influence proclaims its presence.

Again: the epidemic influence is exerted in the modification of certain disorders from which different persons suffer during an influenza season. A lower type of inflammatory affections—as, for example, of bronchitis and other pulmonary diseases—is noticed, and is, indeed, generally to be apprehended. The treatment of such cases demands a corresponding modification. Patients, at such times, will not stand blood-letting, or severe purgation, or the otherwise than very cautious employment of depressing remedies. Far less decidedly active treatment than may have been found absolutely required in the case of a patient affected with an inflammatory disease on a former occasion, will then suffice to lower the vital powers so much as to do real harm.

Influenza may be a simple or a complicated disease: in other words, it may occur in a simple form, manifested by symptoms which all depend upon itself, so to speak; or as an affection modifying to a greater or less extent existing disease, inflammatory or febrile. Simple influenza may, however, present a great diversity of forms as well as of degrees. The expression “epidemic catarrh,” by which the disease goes, points to the occurrence of catarrhal symptoms as being very common, as, no doubt, they are in influenza; but they may be absent, and still the case be one of influenza. The catarrh, too, may exist without the occurrence of febrile symptoms: the fever without the catarrh happens in a smaller number of instances. Great depression, languor, lassitude, anxiety, and lowness of spirits, distinguish some

cases, and characterize, more or less accurately, the epidemic in which they occur, the sufferer having comparatively slight annoyance from the bronchial affection; which again, in other cases occurring in another epidemic, are the fruitful source of discomfort, and, it may be, of peril. The great danger in influenza is when old people become affected by it. The bronchial inflammation is one of its sources; the extreme state of prostration which often results is another.

In all cases of severe influenza, there occurs, and occurs rapidly, a sudden, and, as it were, unaccountable decay of strength, and generally very great depression of spirits: this it is which constitutes the morbid influence—this is influenza. The catarrhal symptoms and those now mentioned are usually associated, but the latter makes the case one of influenza properly so called. With these indications of disordered health there is a foul tongue, with loss of appetite, often at first a bad taste in the mouth, and after a time absence of any taste. Nausea and vomiting not unfrequently occur. Diarrhœa, too, is a symptom; not constant, however, nor frequent. The urine is dark and scanty; the pulse weak, and, if not so, it is easily compressed; the skin, hot at the commencement and dry, becomes bedewed with moisture. Very generally, before the occurrence of the marked febrile symptoms, the patient complains of gnawing pains in the bones; a sense of soreness, increased by touch, in the limbs and back, and along the ribs.

In its simple form, the continuance of the disease may be stated at from two to four days; before the conclusion of a week, the patient is convalescent: but he is not unapt to suffer a relapse; the cough continuing in his enfeebled state, any degree of exertion or exposure to cold may determine the recurrence of febrile symptoms. Patients who have suffered from a three days' attack of influenza, often rise from bed as if they had passed ten days or a fortnight under a continued fever or inflammatory ailment. Nothing can exceed the depressing influence this malady exerts.

A great deal depends upon the previous state of health and bodily constitution of patients affected with influenza.



Attacking old people and persons of enfeebled constitution, the disease is very apt to prove fatal. In those who are the subjects of chronic, it may be of latent, disease—as, for example, of tubercular affection of the lungs—lurking mischief may be developed. Very peculiar care and watchfulness are required in the treatment of such patients, and in their convalescence influenza is very apt to be complicated with acute bronchitis; while in those who are predisposed to bronchial inflammation, this affection is not unapt to assume a very severe form, what is denominated suffocative catarrh, or capillary bronchitis, from the minute bronchial tubes being its seat. This, with a low form of inflammation in the substance of the lung itself, are the complications most to be apprehended in the aged sufferers from influenza.

The most usual critical event observed in influenza is that of perspiration, more or less profuse. When this occurrence takes place in a marked manner on the third, but specially on the fourth day after the onset of the disease, it may reasonably be expected to prove critical: the patient's convalescence dates from that time.

How are the phenomena of this interesting disease to be accounted for or explained? A great amount of difficulty encompasses the solution of this question. It may, however, be stated that a poison of a specific nature (this character it deserves, because its effects are specific, like those produced by other poisons) is absorbed into, and operates upon, the blood—infects the circulating fluid. A period of latency occurs; to this the name of incubation\* is given. Succeeding the period of latency or incubation, there occurs disordered function of the great nervous centres, giving rise to that marked general depression which has been referred to, and accompanied by decided fever, of a continued, remittent, or intermittent character. The special, peculiar, or

\* A figurative expression designed to signify that portion of time—and such exists in the case of all epidemic and infectious diseases—which elapses between the reception of the morbid ingredient, whatever it may be, and the manifestation or marked invasion of the disease; thus it is common to speak of the incubation of small-pox, measles, scarlet fever, cholera, and influenza.



specific local action of the poison in influenza is, as has already been explained, on the mucous surfaces, chiefly of the air-passages—the mucous membranes of nose, eyes, throat, and bronchial tubes; thus it is that the catarrhal, or, in severe cases, the bronchitic, symptoms are caused. But the injurious influence of the poison does not stop there, is not limited to the parts now mentioned: such are the seats of its more ordinary operation; but let a predisposition exist, let the sufferer have been previously affected by some chronic bronchial or pulmonary ailment, and a marked tendency will be observed to participation in the general disorder of the smaller bronchial tubes, or the substance of the lungs, or perhaps the investing membrane of these organs (the pleura). Another and more remote mucous surface not unfrequently suffers, for the existence of diarrhœa is (specially in certain epidemics) often noticed—the evidence of the injurious effect exerted by the specific poison of influenza on the intestinal mucous membrane.\*

Influenza may be said, like many other epidemic diseases, to attack its victims almost indiscriminately. Multitudes of persons, evidently altogether independently of age, sex, occupation, condition, are seized. In general, however, men, from being more exposed to the influence of atmospheric changes, suffer most; women and children less. A remarkable circumstance is observable in connection with influenza—namely, that one person seldom, if ever, suffers more than one attack of the disease during the prevalence of an epidemic. One or more relapses of the original attack may, indeed often do, take place; but these are, of course, to be distinguished from, and not confounded with, fresh accessions. But while persons do not suffer more than one attack during an epidemic, their having once suffered from

\* From the circumstance that the site and character of the local affections in influenza vary in different situations, and particularly in different epidemics, it has been usual with some writers to describe the disease under the heads of Cephalic, Pectoral, and Abdominal Influenza. French writers, indeed, have almost invariably adopted this arrangement; they employ the terms, *La Grippe Cephalique*, *La Grippe Pectorale*, and *La Grippe Abdominale*.

this disease offers no protection, secures no immunity, from subsequent attacks in other epidemics.

Cullen regarded influenza as contagious: he looked upon the intercourse of the sick with the sound as one of the means by which the spread and diffusion of the disease was accomplished; hence he styled influenza the *catarrhus a contagio*. In this view it is more than probable that Cullen was correct; but if so, there can be no doubt that contagion is not the means by which influenza is diffused in the case of those wide-spread epidemical visitations from which so many countries, or parts of countries, almost simultaneously suffer. Some peculiar quality of the air which all in common breathe seems best to account for this; nothing portable communicated from one to another possibly can explain it. It may be reasonably supposed that the occurrence of influenza is, in some way or other, intimately connected with an impure or contaminated condition of the atmosphere.\* Already it has been determined that the origin and cessation, the increase and diminution of influenza, when prevalent in an epidemic form, are oftentimes very remarkably connected with changes of an atmospheric nature: for example, "On a cold night," writes Dr. Maertens of St. Petersburg, "the thermometer rose thirty degrees of Fahrenheit, and next morning 40,000 people were taken ill of influenza." This occurred in the epidemic of 1782. The

\* Schönbein, the distinguished professor of chemistry at Basle in Switzerland, has suggested a theory regarding the influence and effects of atmospheric electricity in relation to the development and march of epidemic catarrhs. A peculiar gaseous and odoriferous matter, named by Schönbein "ozone," which is formed in the atmosphere, has, he conceives, the property of irritating the sensitive mucous membranes, when it is inhaled in comparatively large quantity, and for some time. Another hypothesis, which has been suggested to explain the phenomena of epidemic ailments, and of influenza among the number, is, that, in certain conditions of the atmosphere, there are developed myriads of extremely minute substances, possessing life, either animal or vegetable. These float about, and are driven by currents of air hither and thither. So driven, they are brought in contact with the mucous surfaces of the air-passages, upon which they exercise an injurious influence. The great objection to both of these theories is, that, while possibly accounting for the occurrence of the catarrhal symptoms, they leave unexplained those instances of the disease in which such do not present themselves.

thaw in the instance cited was followed by the outbreak of the disease. But there is no uniform connection between any one particular condition of the atmosphere and the prevalence of influenza, whether as regards heat and cold, or dryness and humidity, or storm and serenity. Irregularities and sudden vicissitudes of weather appear chiefly, however, to mark the progress of influenza.

These observations on influenza must now be concluded by a brief reference to the required treatment. It will be readily understood that much depends upon whether the attack be simple or complicated, and much, too, on the precise form of the simple attack itself; accordingly different remedies and plans of treatment have been recommended to be followed in the different epidemic visitations. A patient affected with influenza will always find it to be the better plan to give way to the attack by keeping bed. Some there are who valorously fight against it for a time, but the contest is an unequal one; and, if it be true influenza, sooner or later the patient must succumb. With confinement to bed, there will be low diet. It is useful to begin medicinal treatment with a laxative, a dose of calomel (5 grains) taken at bed-time, followed by an aperient in the morning, fluid extract of senna (half an ounce); or, in the first instance, the calomel combined with compound jalap powder (20 to 40 grains), when the morning dose of laxative medicine will probably not be required. An emetic in the early stage often brings with its action considerable relief; for this purpose, a single grain of tartar emetic, with 20 grains of the powder of ipecacuanha, will suffice, some warm water being drunk thereafter. When, as sometimes occurs, there is much frontal headache in the commencement of the attack, the application of cold water or of ice to the head may prove beneficial; or even a few leeches may be required. These points being attended to, let some febrifuge remedy be administered; and for this purpose, the mindererus spirit (liquor acetatis ammoniæ), in doses of a dessert or table-spoonful, in water, may be given to an adult every three or four hours; or 2 or 3 grains of James's powder, in a little



warm gruel, may be substituted. If there be sore throat, a mustard poultice may be applied round the throat, and the inhalation of steam, or the use of a simple soothing gargle (milk and warm water) enjoined. If there be much cough, a little expectorant medicine may be given, such as 10 or 15 drops of antimonial or ipecacuanha wine, with the mindererus spirit. During convalescence, quinine or bibeerine will prove serviceable. When the disease attacks old and enfeebled people, though it assumes merely its simple form, such stimulants as carbonate of ammonia, or sal volatile, and wine, will be required; and in not a few cases even in young people such treatment is required throughout. When the more ordinary complications exist, such as bronchitis and inflammation of the lungs, they usually assume a low type; and, in such circumstances, remedies of a stimulating nature are alone admissible.

**INTERMITTENT FEVER**, or Ague. This peculiar form of fever is characterized by attacks which occur at stated times, during the intervening periods of which there is entire absence of fever. Of ague there are three ordinary varieties,—the so-called quotidian, tertian, and quartan. In the first the paroxysm occurs daily; in the second, every other day; in the last, every third day. When an attack of intermittent fever occurs in a well-marked manner, it consists of three distinct stages; these are the cold, the hot, and the sweating stage. An enlargement of the spleen is very generally noticed in connection with ague.

By far the most frequent cause of attacks of ague is a residence in a damp and malarious situation. There are many parts of the world where the disease prevails to a great extent; except in the fenny districts of Lincoln and some other English counties, it is, however, little known in Great Britain. Ague, perhaps in a modified form, is apt to continue for a long period, even after the patient's removal from the malarious district where it was originally engendered; and in some instances the disease is not developed till the marshy residence has long been abandoned.



Various remedies have been employed in the treatment of ague; here, however, it is only necessary to advert very briefly to one, namely, quinine, which possesses so powerful an action on this disease as to merit the appellation of a specific. When administered in ague, quinine may be given either in small and frequently repeated, or in large doses (either in doses of from 2 to 5 grains repeatedly, or in doses of 20 grains and upwards). These are best given during the intermissions of the febrile attacks. Quinine seldom fails to arrest intermittent fever before the occurrence of the second or third paroxysm; and in not a few instances, after its first administration a sudden termination of the disease has taken place.

**ITCH**, or Scabies, is an eruptive affection of the skin, consisting, in the first instance, of vesicles, or minute bladder-like elevations; essentially contagious, and attended by constant and oftentimes intolerable itching. The eruption of itch may appear on any part of the body, with the exception of the face, but it is most frequently seen on the hands, between the fingers, and at the wrists.

Itch is specially, though not exclusively, a disease of the poor and the dirty, attacking males and females alike. The immediate cause of the eruption has been shown to be an insect (*acarus scabiei*).

Being a purely local disease, itch is to be treated by local applications, and the most efficacious are the preparations of sulphur. A small quantity of sulphur ointment, when well rubbed over the affected part from day to day, seldom fails to obtain a cure in the course of one or two weeks, unless the case be one of unusual severity. A speedy cure may also be obtained by the use of a liniment composed of one ounce of liquid storax, two drachms of spirit, and one drachm of olive oil. Along with this there should always be the most careful attention to cleanliness in person and clothes; and the remedies should be applied after the whole body has been well washed with potash soap in a hot bath.

**JAUNDICE** (from the French word *jaune*, yellow), though, properly speaking, a symptom rather than a disease, is generally applied to an affection, the chief characters of which are a yellow colour of the skin and the white portions of the eyes, with a dark appearance of the urine. In most instances, though not in all, the stools are either white or gray in appearance, from the absence of bile; and there is, further, uneasiness often amounting to pain in the right side, perhaps some degree of fulness in the same situation, that of the liver. Vomiting, confined state of the bowels, headache, drowsiness, and a total inability for exertion, are not unfrequent concomitant symptoms.

Jaundice, however, is variously produced; all causes interrupting or preventing the due secretion of bile by the liver, or obstructing the proper flow of bile from the liver to the bowels, may determine it. Thus a powerful mental impression leading to spasm of the gall-ducts, or the obstruction of these canals by gall stones (see *Gall Stones*, p. 124), or by some structural change in the canals themselves, or owing to pressure upon them exerted by disease in their neighbourhood, may give rise to it. Jaundice is, moreover, a common consequence of inflammatory affections of the liver, whether acute or chronic. The immediate cause of jaundice is generally acknowledged to be twofold, dependent either on an arrested secretion, or a reabsorption of bile.

Some kinds of jaundice are wholly incurable,—as, for example, when a cancerous tumour is pressing on the ducts; other instances recover without any special medical treatment. In simple cases of jaundice, purging should be adopted. It not unfrequently happens that the disordered condition of the liver is relieved by a dose of calomel (10 grains), followed by a full dose of senna or castor oil. Persons suffering from simple jaundice in its chronic form should live sparingly; if possible, take exercise in the open air; and favour, by the warm bath taken from time to time, elimination of the biliary colouring matter through the skin, as well as employ aperient medicines.

**KIDNEY DISEASE.** Those important organs, the kidneys, whose function is to secrete the urine, and thus rid the economy of certain noxious ingredients, are liable to various forms of disease.

An acute pain experienced in the loins, with accompanying sickness, and the total arrestment or very limited secretion of urine, and perhaps the presence of blood in what is passed, occurring with or without febrile excitement, generally speaking, mark that affection of the kidneys which is caused by the passage of a calculus. The suffering thus induced is generally very severe, and only alleviated by the concretion reaching the bladder: then it gives rise to symptoms of another nature, which will be shortly mentioned under the head of *Stone in the Bladder*, p. 207.

Inflammation of the kidneys from exposure to cold and damp, the ordinary exciting causes of inflammatory affections, is comparatively rare. The presence of a calculus is, in the majority of instances, its determining cause; or it may be induced by a violent blow or other injury over the back; or it may follow the administration of certain remedies, such as Spanish flies (cantharides) or turpentine.

In such circumstances, besides confinement to bed, low diet, and the withdrawal of all irritating medicines, if the pain be very severe, local blood-letting by cupping may be had recourse to; while in all cases, hot fomentations continuously applied over the loins will tend to ease the suffering. The bowels should be cleared by enemata of warm water; and, if the stomach will retain it, a dose of laxative medicine should be given by the mouth (calomel, 5 grains). Diluents may also be drunk; perhaps the best is common barley-water. (For a few further observations on this subject, see *Gravel*, p. 130.)

That disease of the kidneys which is most frequent in its occurrence is generally known under the name of Bright's disease, from the circumstance of its nature having been, for the first time, carefully elucidated by the late Dr. Richard Bright of London. Recent investigations have, however, shown that under the one name of Bright's disease, several

forms of structural degeneration of the organs, differing very remarkably in their precise nature, have been classed ; some acute, others chronic in character.

Disease of the kidney gives rise to many symptoms, both local (such as pain) and general—the latter more especially ; and is to be recognized by changes which occur in the urine. This secretion the judicious physician will be called upon carefully to examine in many cases of various diseases : the information he thus obtains, when the kidney is itself affected, is of the utmost importance. The chief deviation from the healthy standard of the urine is found in the presence of an abnormal constituent—namely, albumen. Many of the more important symptoms of kidney disease are remote : of this nature are sickness, headache, dimness of sight. A remarkable change in the appearance of the patient, too, takes place : there is pallor of the countenance and surface of the body, owing to changes in the blood ; and dropsy often supervenes. Disease of the kidney, moreover, gives rise to many secondary affections ; of the heart, for example, and lungs. Persons of intemperate habits are peculiarly liable to disease of the kidneys. It sometimes comes on after scarlet fever, necessitating thereby great caution in the management of that affection (see *Scarlet Fever*, p. 190).

In diminishing the tendency to disease of the kidney, nothing is more important than the proper management of the functions of the skin and stomach, temperance, and avoiding exposure to sudden alternations of temperature.

**LEAD COLIC.** See p. 39.

**LOCKED JAW.** The term Tetanus (from the Greek *teino*, I stretch) is applied to that appalling form of disease in which the muscles of the body generally are in a state of lasting rigidity, while, from time to time, paroxysms of spasm occur, attended by excruciating pain, followed by intervals of comparative ease, owing to the partial relaxation of some, the more complete relaxation of other muscles. In this sad disease, which, in the majority of instances of those attacked,



only too surely wears out the powers of life, the mind remains entire. When, owing to the contractions of the muscles in its neighbourhood, the mouth is closed, the expression "locked jaw" is employed.

Locked jaw usually occurs as the result of external injuries, wounds, cuts, or bruises. The immediate cause of the disease is, generally speaking, injury done to the extremities of nerves.

In the treatment of tetanus or locked jaw, care should, in the first place, be taken to remove any existing cause of irritation: if there be a wound, it should be cleansed; and if its appearance indicate the existence of inflammatory action, poultices or other soothing applications should be employed. The great indications in the way of treatment are, first of all, to allay nervous irritation; and secondly, to support the strength of the patient by stimulants, wine and brandy. For the former purpose many remedies have been suggested; perhaps of all, opium may be regarded as the one upon which chief reliance may be placed. It may be administered in larger doses than under other circumstances, the aim being to produce its narcotic effect. Indian hemp (*cannabis Indica*), tobacco, chloroform, are among the other remedies alluded to. When opium, or hemp, or tobacco cannot be taken by the mouth, they are to be introduced into the bowels. Excellent results have also been obtained by the use of chloral hydrate and the Calabar bean; the former in doses of 20 to 60 grains, the latter (administered hypodermically) in doses of half a grain of the extract in ten minims of water.

**LUMBAGO**, a Latin word, is applied to rheumatic pain seated in the muscles of the back. Very often lumbago is suddenly developed in a severe manner, upon making some alteration in the position of the body; as, for example, on rising from bed. Few varieties of pain are equally commanding as that of lumbago; when severe, it fixes the sufferer to one position,—he cannot assume another without exquisite torture. There may or may not be febrile excitement along with the pain.

In the majority of instances, lumbago is connected with derangement of the stomach, and probably also of the bowels; a dose of laxative medicine is therefore to be recommended. In some cases speedy relief is obtained by the subcutaneous injection of morphia. External applications are generally useful,—the application of the warm iron over flannel, and the rubbing of the pained part with Dr. Bow's liniment, or the tincture of soap and opium. After the bowels have been moved, a diaphoretic dose of Dover's powder (10 or 15 grains) should be administered. Whenever the patient is able to move, walking exercise is to be recommended.

**MEASLES** is a contagious febrile disease of very common occurrence, particularly among the young, often assuming an epidemic form, and specially characterized by the peculiar eruption which accompanies it, and by the presence of catarrhal symptoms.

Like other forms of febrile disease, measles usually begins with shivering, and an indescribable feeling of uneasiness and discomfort,—what the French have so well named *malaise*: heat of skin, quickness of pulse, headache, failure of appetite, and thirst supervene. In these particulars measles resembles other febrile diseases; but it differs from them in being attended by redness and watering of the eyes, sneezing and running from the nose, sore throat, and a dry, hoarse cough,—the evidences of affection, more or less marked, of the mucous membrane of the eyes, nose, throat, and chest. Usually these symptoms continue for four days—often, however, for a longer time—before the appearance of the eruption. This is slightly raised above the surface of the skin, and consists of minute papulæ, which form into blotches, having a crescentic shape, and leaving the portions of skin between them of a natural appearance. When fully developed, the colour of the eruption is reddish; as it declines and disappears, it wears a brownish hue. The rash takes two or three days to appear fully, manifesting itself first upon the face and upper part of the body, and then gradually extending over the trunk and lower limbs. It usually

lasts for four entire days, and then declines in the same order as that in which it appeared. After its disappearance, a little scurf separates, and then the natural condition of the skin is restored. Like small-pox and scarlet fever, measles usually attacks an individual only once in a lifetime, though there are numerous exceptions to this rule.

The severity of measles as a disease is to be measured by the character of the chest symptoms which accompany it. When a fatal event occurs, it is ordinarily due to the inflammatory affection of the bronchial mucous membrane. Measles is most to be apprehended in the case of scrofulous children: in such, though recovery from the immediate attack take place, it is only too frequently found that the seeds of lasting disease have been laid.

In the treatment of the ordinary cases of measles occurring in children otherwise than delicate, little is necessary beyond attention to the temperature of the room, the amount of the bed-clothes, and such particulars. Care should be taken that draughts of cold air are avoided, lest they might prove the cause of increase in the pectoral complaint; and while the room is not overheated, it must not, for the same reason, be allowed to be cool. It is well to keep the room darkened, and to prevent the patient from reading or otherwise straining the eyes. Neglect of this precaution is often followed by inflammation of the eyes and of the eyelids. The bowels should be moved by mild laxatives,—a little castor oil, or magnesia; and, so as to produce a slight diaphoretic effect, a small dose (for a child, a teaspoonful) of the *mindererus* spirit, in a little water, may be given at intervals of two or three hours.

Certain points, in regard to measles, require a little more explanation. The rash may be long in appearing, or, having manifested itself slightly on the face and neck, may show a disposition to disappear. In such cases, the development of the eruption may be secured by placing the child in a warm bath: if the child appear sunk and the pulse be feeble, a little warm wine and water may be administered. In ordinary cases, the early appearance of the eruption will be

favoured by administering a dose of sulphur (a small teaspoonful, for a child, in milk); and, if there be much hoarseness, and croupy character of the breathing and cough, it will be expedient to apply the hot sponge over the throat, and to give, according to the child's age, a drop or a few drops of the solution of morphia and antimonial wine. With the appearance of the eruption, these symptoms usually decline.

Measles not unfrequently terminates in an attack of bowel complaint. This may be slight, and not require any medicinal treatment; but, on the other hand, when severe, and occurring in a delicate child, prompt means for arresting it must be adopted (such are mentioned under the heads of *Diarrhœa*, p. 93, and *Teething*, p. 208).

The pulmonary complications of measles are chiefly bronchitis and inflammation of the lungs: such require much careful watching, and must always cause greatly increased anxiety. In the case of previously healthy and robust children, local bleeding by leeches and the employment of antimony will be required: not unfrequently, however, the subjects of these complications are unhealthy and already weakened children; such remedies are, in these cases, inadmissible, and recourse must be had to those means which will tend to support the strength.

**MENSTRUATION, DISORDERS OF.** The stated return of the menstrual discharge in normal amount is intimately connected with the healthy condition of the female system. Like all other functions, however, this is liable to derangement, from which many and serious consequences result. Of disordered menstruation there are three main varieties: first, non-appearance or interruption of the menstrual flow; second, profuse menstruation; and third, painful and difficult menstruation. A few observations will be made under each of these heads.

In Great Britain, the first occurrence of menstruation is usually between the fifteenth and sixteenth year. Mr. Whitehead of Manchester gives fifteen years and six and



three-quarter months as the average, deduced from four thousand cases in which he made a careful inquiry. But though menstruation usually occurs at the period of life now mentioned, the circumstance of a young girl having passed the age of sixteen is not in itself to be considered as a reason for medical interference; for, as Dr. West, an able writer, previously cited, remarks, "The date of puberty varies very widely; and one woman may menstruate at ten, and another at twenty years of age, without the health of either being of necessity impaired."\*

1. Apart from peculiar causes, some dependent on imperfect formation of the organs concerned in the function, and others to which it is here unnecessary to refer, but the existence or absence of which should always be carefully considered by the physician, there are two conditions, in intimate relation with one or other of which the non-occurrence of menstruation is found. The first is a too full habit of body, what is denominated plethora (from the Greek *plethus*, fulness): the second is precisely the reverse, for instead of fulness there is impoverishment of blood; this condition is called anæmia (from the Greek *α*, without, *haima*, blood). While not a few cases belong, in the first instance, to the former class, their gradual tendency is to be assimilated to the latter.

The non-establishment of the important function of menstruation is connected with, or rather entails, many distressing symptoms; of these, headache, frequent flushings of the face, pain in the back and stomach, a confined condition of the bowels, furred tongue, and failure of appetite, are the chief. At pretty nearly regular intervals of four weeks, these symptoms become decidedly increased. They perhaps continue to recur for several months, and then menstruation takes place;—not, however, in a healthy manner, but scantily, and attended by much suffering; liable, moreover, to frequent interruptions, appearing irregularly, with intervals of months intervening. Another occurrence frequently noticed is, the bleeding taking place from some other part

\* Lectures on the *Diseases of Women*.

of the body; most commonly from the nostrils, but also from the stomach. The general health is, at the outset, only slightly affected; but by degrees all the functions become impaired: there is entire loss of appetite, and much failure of strength; and, most remarkable of all, the countenance comes to wear a peculiar pale and sickly appearance, from which the term chlorosis (from the Greek *chloros*, green) is given to the affection. The depraved condition of health thus established is always to be viewed with anxiety: while it lasts, there is an increased tendency to the insidious development of many general and local diseases; it is at such a time that, in not a few instances, the first seeds of consumption are laid.

The treatment of cases resembling those now described should embrace every possible means of improving the general health: particularly the enjoyment of pure air, and the use of the shower-bath; moderate exercise, specially horse exercise; with a wholesome nutritious diet. Of internal remedies, that which, in the great majority of instances, acts most beneficially is iron, in the form of one or other of its numerous preparations. The bowels being confined renders the employment of iron, along with some laxative medicine, most desirable; and, with this view, there is probably no better combination than the aloes and iron pill (containing aloes and sulphate of iron), of which one or two may be taken daily, according to the effect produced. When the slightest appearance of menstruation appears, the patient should be kept as quiet as possible; and, in order to encourage the flow, recourse should be had to the use of the warm hip-bath. In some cases, when much pain is experienced, the application of leeches to the groins not only serves to relieve it, but is often followed by menstruation.

But, as already mentioned, menstruation, besides being tardily developed, is very frequently either interrupted or suppressed. No cause operates more powerfully in this way than cold, particularly wetting of the feet. The same suggestions, in the way of treatment, apply as in the former

case. When interruption has taken place suddenly, recourse should be had to the warm hip-bath, bed, and some warm drink, such as sherry and water, or a little brandy, or hot ginger water. When cessation for one or more periods has occurred, then it is specially important to favour, as much as possible, its restoration by attention to those particulars of general treatment already adverted to.

2. An excess of menstruation may show itself in three different ways, and these may be distinct, or, to a certain extent, combined; the flow may be profuse, or it may continue an unusually long period, or it may return at shorter than the natural intervals. The causes of this condition are very various; some are seated in the general system, others in the organs more immediately connected with the function which is at fault.

Females who know themselves to be liable to Menorrhagia, as this disorder of menstruation is called, should be careful to observe certain simple rules, including attention to the proper function of the bowels, and the maintenance of the horizontal posture, from the time when the discharge commences till its cessation. In addition, if the discharge, besides being copious, is continuous, recurring over and over again, it is necessary to use astringent remedies, such as alum, gallic acid, acetate of lead, and opium (see in Appendix). When the discharge is so profuse as rapidly to reduce the patient's strength—still more, if by it, as has happened sometimes, life be brought into peril—local means of arresting bleeding must also be adopted: foremost among these is the application of cold,—cold cloths placed over the lower part of the belly, and to the groins. Injections of cold water may further be employed, and also astringent injections, as of matico (see Appendix). Should these means fail, other expedients can be resorted to; these, however, necessitate the attendance of a skilful nurse or of the physician.

3. Difficult or painful menstruation is a third and very common disorder of the menstrual function, known under the name of Dysmenorrhœa. The most common form of this complaint is ranged under the head of Neuralgia, for

the violent pain with which it is accompanied bears a close resemblance to neuralgic pains experienced in other parts of the body. In such, if the affection is of long standing, the nervous system generally has probably sympathized, and headache, with hysteria and many other distressing symptoms, accompany the menstrual disorder. In another form, sometimes distinct, at others allied with the neuralgic, there is, at or near the conclusion of the discharge, and accompanied by increased pain, the separation of shreds, or thin layers of membrane. Many cases of this nature are connected with marked constitutional derangement, more particularly with gout and rheumatism.

For the relief of the extreme pain which accompanies this complaint, soothing remedies are rendered indispensable, opium particularly, in the form of Battley's sedative liquor (of which 20 drops are equal to 30 of laudanum), the warm hip-bath, and the application of mustard poultices or turpentine stupes over the lower part of the back. In the general treatment, the greatest attention must be paid to diet and regimen; while, according to the different phases which the complaint is liable to assume, will particular plans of treatment, local and constitutional, suggest themselves to the judicious physician.

**MUMPS** (Sullenness), or in the Scottish language, Branks (from *branks*, a bridle, because the chops are compressed as are those of a horse when he wears the branks), is an inflammatory swelling of the parotid gland, at the angle of the lower jaw, beneath the ear, and of the other glands—the submaxillary and sublingual—concerned in the secretion of saliva. One side of the face may be affected alone, or both; usually first one side and then the other suffers. The disease is accompanied by much pain, and causes, while it lasts, a curious deformity; the patient with difficulty opens the mouth, so that little food can be taken. The duration of the affection is about ten days, but after the fifth the swelling of the face and accompanying fever are on the decline.

Mumps usually prevails epidemically, but there can be



little doubt that it is capable of direct communication from the sick to the sound. Occasionally the inflammation leaves the glands of the neck and attacks the testicles of the male, or the mammæ of the female; and a more serious metastasis, as this sudden transference is called (from the Greek *metathemi*, I change place), to the brain may occur,—this is, however, very rare. Mumps attacks young people, chiefly boys, though adults occasionally suffer.

The appropriate treatment of mumps includes confinement to bed; the continued application of warm flannel fomentations to the swollen part; and the employment, in the first place, of gentle laxatives, and then of a diaphoretic medicine, such as the mindererus spirit. If the testicles or mammæ become affected, the warm fomentations must be removed to them; and if the pain prove severe, two or three leeches may be applied.

**NETTLE RASH**, in medical language *Urticaria* (from the Latin *urtica*, a nettle), is a form of cutaneous eruption, so called from the resemblance it bears to that produced by the stinging nettle. There are little elevations, having a white or whitish centre and red circumference. The eruption is accompanied by much itching, and frequently by no inconsiderable degree of febrile excitement.

Nettle rash is closely connected with derangement of the stomach; it is often, in fact, an evidence of indigestion. Particular kinds of food, specially shell-fish and certain vegetable substances, scarcely ever fail to produce it in some individuals; in others, it seems intimately allied with a rheumatic constitution.

Nettle rash may last only for a few hours, or continue for many days. For its removal, a proper regulation of diet and the use of laxative medicine (rhubarb and magnesia) are required. Little benefit results from local applications, but a lotion may serve to allay the at times intolerable sensation of itching. For this purpose, a half drachm of sugar of lead in four ounces of rose-water, with two teaspoonfuls of laudanum added, will be found useful.

**NEURALGIA** (from the Greek words *neuron*, a nerve, and *algos*, pain) is a generic term applied to certain diseases, the principal symptom of which is a severe pain experienced in the course of a nerve or its branches, liable to frequent exacerbations, and to intermissions likewise. No inflammatory manifestations, properly speaking, accompany neuralgia, —no redness, heat, or swelling; though, in certain cases, one or more of these may be superadded.

The parts of the body most usually affected by neuralgia are the face and head, and the extremities; but all the organs of the body may, in truth, become the seat of neuralgic pain. The attacks of pain may occur at intervals of a few seconds, or so long a period as a day or two, or even longer, may elapse. They may recur with marked regularity, coming on at the corresponding period of each day, and again at the same time ceasing; or the attack and the cessation may be alike irregular.

Very frequently neuralgia is found in connection with derangement of the general health—with stomach affection, rheumatism, gout, and uterine disorder; and in endeavouring to relieve the pain, these causes of it must not be overlooked.

When periodic in its occurrence, neuralgia will often yield to quinine or bibeerine; when connected with rheumatism, to arsenic; with gout, to colchicum; when associated with stomach derangement, to laxatives and antacid remedies. Great relief is often obtained by the subcutaneous injection of morphia, according to the method introduced by Dr. Alexander Wood; and in not a few cases permanent cure is in this way attained. Certain external applications tend to mitigate the pain of severe attacks,—such as warm fomentations, a little laudanum, chloroform liniment, or a few drops of the tincture of aconite with water.

Under the heads of *Sciatica* (p. 195) and *Tic Douloureux* (p. 213) will be found some further observations on neuralgic affections.

**OBSTRUCTION OF THE BOWELS.** Under the head of *Constipation* (p. 44), observations have already been made

upon the habitually confined condition of the bowels. When constipation has lasted for some time, and the employment of the ordinary purgative remedies has failed to procure passage, the condition of obstruction may be stated to exist.

In the treatment of such cases, it is specially important to determine, in the first instance, whether or not a hernia or rupture (see *Rupture*, p. 186) exists; such being present may be the explanation of the occurrence of the obstruction. If no rupture exist, the obstruction may depend on impaction of feculent matter in the course of the bowels, or it may be caused by what is called invagination of the bowels (one portion of the intestine having slipped within another); other causes than these, to which it is unnecessary here to allude, may operate in causing its production. In such cases, sooner or later, inflammatory action is liable to be excited. Vomiting is one of the attendant, and often one of the most painful, symptoms of this condition; and in some instances feculent matter is ejected from the stomach.

In the early treatment, recourse is generally had to the exhibition of the stronger purgative medicines: calomel, jalap, salts, and senna. These perhaps succeed, perhaps they fail; and then enemata are administered: large warm-water injections, which occasionally overcome the obstruction. In recorded cases the obstruction has been overcome in some by dashing cold water over the belly; in some, by the employment of galvanism; in others, by inflating the bowels by means of the bellows. Occasionally, when least expected, the bowels have moved: through an effort of nature the obstruction has yielded. When inflammatory symptoms, local pain, aggravated by pressure, heat of skin, quickness of the pulse, have manifested themselves, all employment of purgatives should cease, and recourse be had to soothing remedies, more especially to opium, in frequently repeated doses.

**OPHTHALMIA** (from the Greek word for the eye, *ophthalmos*) is the term applied to all the inflammatory affections of the eyeball, attended by redness of the conjunctivæ

or white portions. The conjunctival membrane alone may be the seat of inflammation, or, as frequently happens, certain of the other tunics of the eye may be at the same time affected.

The chief symptoms of ophthalmia are, redness of the surface of the eye, pain and constant uneasiness, lachrymation, and adherence of the eyelids and eyelashes: great intolerance of light, and failure, to a greater or less extent, of vision, are consequent upon the extension of the inflammation to, or its original occurrence in, other parts of the organ.

Derangement of the general health is frequently found in connection with inflammatory affections of the eye: thus, rheumatic inflammation of the eyes is far from uncommon; and when so, besides the required local, there must be constitutional treatment as well. /

Soothing measures, such as the maintenance of the antiphlogistic regimen, already referred to, are required in all severe cases of ophthalmia; low diet, and confinement to the house, unless the weather be peculiarly mild, and free from dampness. A purgative dose of calomel and jalap will be found useful at the commencement; and the employment of some gentle febrifuge, as the mindererus spirit, if there be any degree of constitutional disturbance. The application of cloths dipped in cold water is very grateful when the patient feels a sense of great heat in the eye; when the uneasiness resembles what might be produced by the presence of sand in the eye, instead of cold, warm applications may be made. Many physicians place great confidence in the use of medicated applications to the inflamed eye; and of these the chief is a solution of nitrate of silver, of the strength of 3 or 4 grains of the salt to the ounce of distilled water. A single drop of this is to be introduced into the eye once or twice daily till the redness and other symptoms subside.

A more serious form of ophthalmia than the one now briefly described, is the so-called purulent ophthalmia: in it the inflammation of the conjunctivæ is attended by the formation and discharge of thick yellow matter, and other im-



portant parts of the eye are apt to become not only involved, but destroyed. This affection is a common disease in hot climates, particularly in Egypt; hence it is named Egyptian ophthalmia. In this country it is most frequently seen among young children; and when so, it is by no means so formidable a disease as among adults. In purulent ophthalmia the eyelids become greatly swollen; and, in some instances, it is impossible to open them to obtain—what is so necessary—a proper view of the condition of the eye itself. In this state, the application of a single leech to the upper eyelid may relieve the tumidity; but the loss of blood from the bite must be carefully controlled (see, in Part II., under *Bleeding*, p. 227). When the eyelids can be opened, a solution of nitrate of silver (somewhat weaker than that employed in the common ophthalmia of adults), or of alum (4 grains to the ounce of distilled water), should be carefully injected, by means of a small glass syringe, into the eye twice daily: while this local treatment is being carried on, the condition of the bowels should be carefully regulated by small doses of magnesia.

A third form of ophthalmia is often met with in the case of scrofulous children; it differs mainly from the other affections of the conjunctivæ in the existence of little pustules on its surface or on that of the cornea. With this ailment there is usually great terror for the light, therefore a shade should be worn. Local applications are also useful in it: a drop of the nitrate of silver solution, or of the wine of opium (the latter being preferable in slow cases), introduced from time to time. The application of a small blister over the temple or behind the ear often effects great benefit. With attention to the part chiefly affected, the general health must not be overlooked: change of air and scene, gentle exercise, nourishing food, warm clothing, are the chief means under this head.

**PALPITATION.** By this term is understood inordinate action of the heart, the pulsations of the organ being so far excited as to prove a source of inconvenience, or, it may be,

of alarm. Such may be temporarily produced, by any sudden or violent emotion ; but unless continuous, or very frequent in their recurrence, these attacks scarcely amount to what is meant by palpitation.

The morbidly increased action of the heart is often excited by causes operating on the organ through the medium of the nervous system. Under this head are to be ranked the continued use, or rather abuse, of strong tea, tobacco, and spirituous liquors. Various other agencies act in a very similar manner ; such as intense study, sedentary habits, habitual want of sleep. Palpitation is further induced by an altered condition of the blood : thus the sufferers from gouty affections are frequently annoyed by it ; and there are many other diseases seated in different and distant parts of the body, very often in the stomach, which, by occasioning disturbance of the nervous system, give rise to inordinate cardiac action. In those disordered conditions of the system which have already been incidentally alluded to as plethora and anæmia (see p. 168), the action of the heart becomes more or less affected ; and in the latter, more especially, palpitation of a distressing nature is excited.

In the case of all sufferers from palpitation, it becomes a point of the greatest importance to determine whether it depends simply upon functional derangement of the heart, or is connected with some organic change ; for of the latter, palpitation is one of the most common symptoms. Even in those instances where it is clearly dependent upon the former cause, much care is required in treatment, and the employment of every available means for its removal rendered necessary ; because, when neglected or unskilfully managed, the functional derangement with which the palpitation is associated is only too apt to pass into serious organic disease.

The first great object in the treatment of palpitation is to remove, if possible, the cause : the use of such stimulants of the nervous system as have already been adverted to, specially of spirituous liquors and tobacco, should be unhesitatingly and entirely interdicted. The regimen should be carefully regulated : all sudden emotions avoided ; a due amount

of sleep enjoined ; all hard study prevented ; exercise in the open air, and on level ground, secured ; while for diet, along with farinaceous articles, the lighter kinds of animal food may be permitted, if there be no contradiction of their use owing to the deranged condition of the stomach. Care should be taken that the clothes worn by the patient are not tight, that they by pressure do not incommode the action of the heart. While the ordinary use of nervous stimulants is not to be allowed, but, on the contrary, prevented, during a paroxysm of palpitation—for the increased and uneasy action of the heart is prone to occur in paroxysmal exacerbations—a small quantity of such a stimulant as sal volatile alone, or with some camphor julep, or even a cup of strong tea, may serve to allay the disagreeable sensations it induces.

To prevent their recurrence and control the excited action, there are various serviceable remedies : opium in the form of its camphorated tincture (of which a teaspoonful repeatedly administered is the dose), the tinctures of henbane and of digitalis and hydrocyanic acid, are among the number. When connected with gout, colchicum will be found useful, in connection with careful attention to diet ; when impoverishment of the blood exists, iron in one or other form ; when plethora obtains, a few leeches applied over the cardiac region may be required. When the general health has suffered, without any very obvious anæmia, such invigorating means as the shower-bath, and rubbing of the surface of the body, with other kinds of exercise, should not be neglected.

**PALSY**, or Paralysis (from the Greek *paraluein* ; literally, to relax or disable at the side), may be defined as a loss or decided diminution of power of muscular movement in one or more parts of the body, sensibility remaining, or being lost. It is common to include, under the head of Palsy, the loss of sensation as well as that of motion ; but this is erroneous ; and the latter deprivation is best expressed by the term anæsthesia (from the Greek *α*, without, and *aisthesis*, sensation).

The most common forms of general palsy are, when one side of the body is affected (Hemiplegia), and when the lower part of the body suffers (Paraplegia). But the palsy may be limited to certain muscles, constituting what are called local palsies; and in the same way anæsthesia may exist in the parts supplied by a certain nerve only. The general forms of palsy usually depend on morbid alterations in the great nervous centres, the brain and spinal cord. Apoplexy is very commonly attended by more or less decided palsy.

The required treatment, in cases of palsy, varies very considerably; much depends upon the view which the physician takes of its precise cause. The usual means employed may be said to include the cautious use of all forms of stimulating applications, as blisters, setons, the cauter, and electricity. Special remedies—as, for example, *nux vomica* (or strychnine) and belladonna—are useful in particular cases; and all demand the greatest possible care in regard to the regulation of the stomach and bowels.

**PILES**, or Hemorrhoids (from the Greek *haima*, blood, and *reo*, I flow), are small tumours, generally speaking formed of varicose or dilated veins, and seated at the end of the bowel. Piles are divided into external and internal. They seldom occur before adult life; and are, perhaps, more common in females than in males.

The most common predisposing causes of piles are, habitual constipation, pregnancy, and disorder of the liver. Among the more ordinary exciting causes are cold, and wet, and too free purging.

Piles, whether external or internal, may be removed by operation; and that may either be by the knife or by ligature, by the clamp and scissors, or by the application of a powerful caustic, usually nitric acid. In the treatment of piles, without having recourse to operative interference, something is to be done by careful regulation of the bowels. For this purpose sulphur has long been a favourite remedy; astringent applications, too, may be used—perhaps the best of these is an ointment composed of galls and opium. Clean-



liness, by frequent ablution, should be strictly attended to. Bleeding piles are a great source of annoyance, and they may come to be of danger also.

**RELAPSING FEVER.** The variety of fever to which this name has been assigned is only known to occur in an epidemic form. During recent years it has been three times epidemic in Edinburgh; namely, in 1843-44, in 1846-47, and in 1870-72. Though frequently severe, it is very rarely indeed fatal.

Like all febrile complaints, this disease commences with shivering, which, as a general rule, comes on quite suddenly, the person attacked being up to that time in the enjoyment of his usual health. Following the shivering, are headache (often very acute) and the usual symptoms of a disordered state of the stomach and bowels—namely, a foul tongue, nausea, and not unfrequently vomiting, loss of appetite, and thirst. In very severe cases, the surface of the body and the white portions of the eyes become yellow in colour; in short, jaundice supervenes. At the termination of a week from the first occurrence of these symptoms, usually on the seventh day, a crisis takes place: generally by a profuse perspiration over the whole body; in a few instances by bleeding from the nose; in others by a diarrhœa; and then, though considerably weakened, the patient is virtually convalescent. The restoration to health does not, however, continue for more than from five to eight days; for usually, within that period, the original symptoms recur, perhaps in a mitigated form, but perhaps even more severely than at the first—shivering, headache, disorder of stomach, by which the individual is again prostrated. This is the relapse. The febrile symptoms which constitute it continue for a like period, and are once more terminated by a profuse perspiration, or in the other ways already mentioned. After this, probably a permanent convalescence commences; but, in not a few instances, a second relapse, and in a few even a third, take place.

This form of fever has been, in all probability, known for upwards of a century.

In the way of treatment, it will generally be found that some degree of relief is afforded by free action of the bowels in the early stage; and from the employment of one of the ordinary febrifuge remedies, such as the *mindererus* spirit. Many methods of preventing the relapse have been tried; all have, however, failed. Quinine, *bibeerine*, arsenic, and other antiperiodic remedies, have proved useless; emetics, and divers plans, quite ineffectual: the relapse will come. It is of great consequence, in the interval of freedom from fever, before its recurrence, that the patient should live quietly; and that the appetite, which may be fully restored, be not fully indulged.

**REMITTENT FEVER.** This form of fever resembles another already described—Intermittent Fever (p. 159), in so far as in both there occur intermissions; but in the latter the freedom from febrile disturbance during these is complete, whereas in Remittent Fever, though the feverish symptoms abate, there continue, during the intermissions, that general discomfort and feeling of indisposition which characterize the complaint. Remittent Fever frequently passes under the names of Bilious Fever, and Bilious Remittent, because almost invariably associated with symptoms of disordered liver. Such a form of fever occurs chiefly in hot climates, produced by malarial causes, the presence of much moisture and of decaying vegetable matter.

There is a peculiar form of fever, prevalent in childhood, to which the name of Infantile Remittent has been given. In the great majority of cases this is Typhoid Fever, and the cases present more or less distinctly the chief features of that malady as it is seen in the adult. Children from two to ten years of age suffer from it most frequently.

Usually the affection comes on suddenly, and the febrile excitement runs high. But, after the continuance of a hot skin, and quick pulse, with pain in the head, loss of appetite, and other feverish symptoms, for some hours, these all undergo a great change, becoming much less observable; and, when morning arrives, the child is found almost free

from fever. As the day advances, the condition of feverishness returns; and so the disease continues for a few days, but it may also be for weeks. With these symptoms, there is very generally found some sufficient cause of irritation; perhaps in the mouth, the child losing his teeth at the time; or, as happens more frequently, in the stomach and bowels. The latter are generally very irregular, diarrhœa occurring at one time, constipation existing at another; worms, moreover, are often present. The child is irritable and very fretful.

While the disease lasts, small doses of rhubarb and magnesia should be given to regulate the bowels, unless diarrhœa exists; and, if so, lime water with a little milk added will be found useful. Quinine should be exhibited in doses proportionate to the age of the child (half a grain to one grain, three or four times, at intervals, during its continuance); and it may be alternated with the mindererus spirit, which, when a little sugar is added along with the water, children usually take quite readily. The warm bath, or the application of hot fomentations over the belly, should not be neglected.

As to diet, that must for a time be of the simplest possible description, the lighter farinaceous articles being alone permitted—arrow-root and sago. The child is thirsty, and may be allowed water to drink.

Cases of this nature must always be carefully watched; for during their progress various symptoms of a serious and alarming nature are apt to be developed, sometimes connected with the head, sometimes with the belly.

When convalescence is fully established, much caution is requisite in regard to diet: no articles difficult of digestion should be given to the child; very gradually, from a wholly farinaceous diet, may one of mixed animal and farinaceous food be reached; the former including mutton and beef tea, and chicken soup. Great care must be taken to disinfect the motions of the affected child; and if the patient be living in a house in which the poison is present from defective drainage or sewer accumulation, steps should at once be taken to remove the child or rectify the fault.



**RHEUMATISM** (from the Greek *reumatismos*, and that from *reuma*, a flow) is the term applied—not very accurately, it must be allowed—to pains situated in the joints and in various parts of the muscular system; for these may differ essentially, both in their nature and exact seat. Rheumatism may be defined as a blood disorder in which there is a tendency to inflammatory affections of the fibrous textures of the body: its usual manifestation is in those parts where fibrous textures exist, and more especially in the joints.

It is customary to speak of two kinds of rheumatism, which, though in numerous examples perfectly distinct the one from the other, are, in not a few, so blended as almost insensibly to pass into each other. The one is Acute Rheumatism, or, as it is often named, rheumatic fever; the other, Chronic Rheumatism. A brief description of these two will now be offered:—

**ACUTE RHEUMATISM** is usually attended by great pain, heat, redness, and swelling in certain of the joints, more particularly of the upper and lower extremities. Sometimes the knees and ankles, or the shoulders and elbows, suffer most; in other instances the small joints of the fingers and toes are chiefly affected. The pain and swelling manifest a disposition to pass from the joints of one part, or limb, to those of another. With the affection of the joints there is always much disturbance of the general system, great fever, quick pulse, hot skin, which becomes covered with profuse, sour-smelling perspiration,—bringing with it, however, no relief to the sufferings of the patient. The stomach and bowels are deranged; indeed, if careful inquiry be made, it will often be found that such has been the case for some days before the attack of rheumatism came on. The urinary secretion, too, shows a marked derangement; it is dark in colour, and deposits a sediment often resembling brick-dust.

Rheumatism in its acute form is chiefly a disease of youth: it is far more common between fifteen and thirty-five than after the latter age. Yet a more advanced period of life is by no means free from it.

Though a very painful complaint, rheumatism would not



be a dangerous one, were the inflammation limited to the fibrous structures of the joints. Unfortunately there is a great risk of the heart, either in its investing membrane (the pericardium) or its lining membrane, becoming involved; and thus the danger attending the disease is very largely increased. The evidence of the heart having become affected in the progress of acute rheumatism is sometimes distinct enough from general symptoms,—pain in the cardiac region, the anxious expression of the countenance, and hurried breathing, with quickened pulse, proclaim it; but oftentimes a serious change may be going on without any very apparent indications. It is in such circumstances more especially, though he will not fail diligently to employ them in all cases of acute rheumatism, that the judicious physician receives the most valuable aid from the special means of diagnosis already adverted to, and more particularly from percussion and auscultation.

In some instances acute rheumatism appears as a highly sthenic complaint; in others its character is very much the reverse: instead of the full bounding pulse, with flushed countenance, and strong habit of body of the former patient, there is a comparatively feeble circulation, a pale countenance, and a feeble constitution to deal with. These cases, too, require a very different plan of treatment. In the former, blood-letting, though perhaps not urgently demanded, may do good; in the latter it could only do harm.

Various are the remedies which have been employed in the treatment of acute rheumatism. Reference will only be made here to one or two. It is well, if the bowels be constipated, to commence treatment with the exhibition of a purgative—and it had better be mercurial; calomel (5 to 8 grains), with compound jalap powder (20 to 40 grains); thereafter alkaline remedies, such as the bi-carbonate, nitrate, or acetate of potash, may be exhibited from time to time, largely diluted with water. The author specially desires to express his confidence in the remedial virtues of the last named, when given in half-drachm or drachm (30 to 60 grains) doses, every three or four hours; he has re-

peatedly seen very severe cases of acute rheumatism terminated in a few days when this plan was steadily persevered with. In some cases the alkalies are not well borne, either enfeebling the patient and rendering the pulse irregular, or inducing distressing flatulent distention of the stomach and bowels. A dose of opium, either in the form of laudanum (15 drops), or as Dover's powder (10 grains), given at bed-time, is a useful adjuvant. The pained joints should be enveloped either in flannel or in cotton wadding, or painted over with an anodyne liniment. In many cases a tonic treatment is necessary from the first,—quinine, iron, or both in combination, being required. In almost all it is well to employ these remedies in the later stages of the malady. Strong testimony has recently been advanced of the value of salicylic acid, salicylate of soda, and salicin in the treatment of the disease. When the heart becomes affected, local bleeding is, in some cases, demanded: this is best effected by the application of leeches. While the alkaline remedies are continued, it is well to give, in addition, a little diaphoretic, such as the James's powder, in sthenic cases. In the asthenic, mustard and afterwards cotton wool should be applied locally, while quinine or salicin is given inwardly. In many patients who have suffered from acute rheumatism there is a tendency to recurrence of the symptoms, and they generally have warnings premonitory of the fever in the form of slight rheumatic pains in individual joints which have been exposed to cold and wet. If during this period they take precautions, and use the alkaline medicines, the attack may generally be averted.

CHRONIC RHEUMATISM is characterized by the same pain in the joints as the acute disease now shortly considered; but there is not the disturbance of the system generally as in it. With the pain there is usually much stiffness and swelling, while, in many instances, a great amount of deformity results.

Chronic rheumatism varies not a little in its precise nature; and undoubtedly cases are met with which are benefited by very different remedies and plans of treatment.

Some are relieved by heat, and suffer most during cold; others are always aggravated by a high temperature. Friction relieves one case, but proves quite intolerable to another. Dampness of the weather is, however, never well borne; and climates remarkable for it should be avoided by all rheumatic patients. Among the particular remedies which have been, and will no doubt be, successfully employed in particular cases, may be mentioned—arsenic, cod-liver oil, colchicum, guaiacum, and iodide of potassium (see Appendix).

**RINGWORM** is a form of cutaneous eruption, so named from the peculiar shape in which it appears, that of distinct rings, often quite circular, enclosing a portion of sound skin. The disease is unattended by any constitutional disturbance, and, save at the outset, when a slight pricking sensation is usually experienced, by any local uneasiness. The most common seats of ringworm are the face, neck, and scalp; not unfrequently, however, the eruption appears on the shoulders, arms, and hands. It may last only for ten days or a fortnight, more usually for weeks, or, when assuming its decidedly chronic form, for months. The disease is contagious, and this property has invested it with a peculiar disagreeableness.

Of local applications, which are chiefly to be trusted to, the best, in the earliest stage, is lunar caustic: when the circles are gently touched with the nitrate of silver, a slight desquamation of the blackened skin usually occurs in the course of a few days, and this is often followed by the entire disappearance of the disease. Another efficacious application is the citrine ointment, of medium strength. Great attention should be paid to cleanliness; and, while the eruption continues, the patient should be carefully nourished, as the malady is peculiarly apt to affect debilitated subjects.

**RUPTURE** (in medical language, *Hernia*) may be defined as a protrusion, from an internal cavity, of a portion of its contents. By Rupture, however, is usually understood a

protrusion of the contents of the belly. This may be of various kinds, and differ in precise situation. Generally speaking, a tumour, which may be of considerable size, or very small, appears in one or other groin, or in the parts in the immediate neighbourhood of the groins. If the rupture be what is styled reducible, the tumour will be soft; and, if the patient coughs, an impulse will be communicated to it.

To return, or reduce, as it is called, such a protrusion, the patient assumes the recumbent posture, removing all force from the belly, and steady pressure upwards is made in the direction from which the descent took place.

To retain the part, which is prone to escape, an instrument is employed, styled a truss, which is furnished with a pad and strap; the former being carefully adjusted over the outlet through which the protrusion passes. When the occasion has occurred for the use of truss—and all who suffer from rupture, young or old, should have recourse to it—great care should be taken to apply it properly, and on no account to overlook its constant adjustment, unless when in bed.

The most serious consequence of rupture is when it becomes not merely irreducible,—such often occurs, necessitating the greatest care, more especially in the regulation of the bowels,—but what is termed strangulated; by which is meant an obstruction to the proper function of the bowel, owing to the pressure exerted on the part which is protruded. In cases of obstruction of the bowels, this is an accident the possible existence of which should always be immediately determined. With the addition of pain in the part itself, the symptoms are those of obstruction. In the treatment of strangulated hernia, it must be left to the judgment of the surgeon to decide whether the case is one in which attempts at reduction are to be made, or the operation requisite for its relief undertaken.

**SACCHARINE DIABETES.** The term Diabetes is compounded of two Greek words—*dia*, through, and *baino*, I pass; and is applied to that peculiar form of disease in which there is an excessive passage of urine. In a more re-



stricted sense, it is used to signify that remarkable affection which is attended not merely by a large flow of urine, but by the presence of sugar in it. This is Saccharine Diabetes.

The disease is most common during the middle periods of life, and may be considered as rare in childhood and old age. It occurs, too, more frequently in males than in females. It is not unfrequently hereditary.

Along with the greatly increased secretion of urine, the more invariable symptoms are great thirst, inordinate appetite (which, however, often fails, and is generally treacherous), constipation of the bowels, and various dyspeptic symptoms, such as flatulence, pain in the stomach, and feeling of distention, a flabby tongue, and the breath possessing a peculiar odour like that of hay. The skin becomes dry and harsh, little affected by diaphoretic medicines. When these indications have existed for any time, there will always be found much general weakness and loss of flesh, with considerable mental despondency.

Diabetes frequently terminates in consumption; sometimes in organic disease of the kidneys; and, in certain instances, without the development of any other specific ailment, the strength becomes gradually worn out, and the patient sinks.

The amount of urine passed by diabetic patients varies considerably: in some instances as many as forty pints will be voided; from twenty to thirty is by no means uncommon. The urine of saccharine diabetes is remarkably pale and translucent: its density is very high; and when heated to evaporation, it yields crystals of sugar. The existence of sugar in the urine is further to be learned from the taste, which is sweet, and by the employment of numerous chemical tests.

In the treatment of saccharine diabetes, attention to diet is of the utmost importance. Every variety of saccharine food, or of what is readily convertible into sugar within the economy, is to be avoided. For this reason, a diet of animal food is preferable; but as few persons are able to subsist for a length of time on a diet purely animal, some amount of

farinaceous articles may be allowed. Food should be taken at short intervals, rather than in full meals. For drink, the patient should use distilled water, or lime water, to which milk may be added: Vichy mineral water is also an excellent drink. When the patient's state of weakness is such as to require some stimulant, there is the authority of the late Dr. Prout—who devoted great attention to this disease—for recommending sound London porter. The bread used by diabetic patients should be well fermented, and rather stale: if toasted, it should be in thin slices, thoroughly browned. The bran loaf, and gluten bread from which the starch of flour is removed, are preferable to the ordinary bread.

As regards medicines, purgatives are useful for directing the fluids into other channels, and so leading to a diminution of the urine: the best for this purpose are castor oil and rhubarb. Remedies which determine to the skin are useful also, though not unfrequently they fail to produce the desired effect. Opium has been highly prized by some; and as it tends to soothe nervous irritation, it is preferable to other astringent medicines, which, all in their turn, have done good in certain instances. Bromide of potassium has been found useful in some cases. But it must be admitted that the proper medicinal treatment of diabetes is still involved to a great extent in obscurity. This much is certain, that those means which prove most serviceable in improving the general health are likely to do good in saccharine diabetes. Cod-liver oil has proved a valuable remedy in the hands of not a few physicians. Some recommend alkaline remedies; as, for example, M. Mialhe, who conceives the disease to depend on increased acidity during digestion. He gives from half an ounce to an ounce of bi-carbonate of soda, with one-fourth the quantity of calcined magnesia, in the course of twenty-four hours. Other remedies, which have been used and are favourably viewed by certain physicians, are rennet and arsenic, lactic acid, and glycerine. Even sugar has been suggested and employed, particularly by M. Piorry of Paris and Dr. W. Budd of Bristol; but this treatment has proved injurious in some cases in which it has

been employed. Another plan of treatment, which has attracted much attention of late, and which proves in some cases beneficial, is the skim-milk treatment. The patient is directed to live entirely upon skim-milk.

The other form of diabetes to which allusion has been made is termed the Diabetes Insipidus (tasteless). In it the flow of urine is much increased, but no sugar or other abnormal ingredient is contained in it. To external appearance, the secretion does not differ from the saccharine urine; but its density is far below that of healthy urine, instead of being greatly above it. Great thirst is a constant symptom in this form of ailment. Instances of it are, however, very rare.

**SCARLET FEVER**, or *Scarlatina*, is another of the same class of febrile diseases to which measles and small-pox belong. It is specially characterized by the appearance of a bright red eruption or efflorescence over the body and limbs, and by sore throat.

The disease usually commences with shivering, followed by headache, and frequently by vomiting. Very soon a feeling of discomfort in the throat supervenes; and generally before the close of the second day, though sometimes delayed to the third or fourth, there is the uniform red eruption visible.

The cases of scarlet fever differ according to the amount and character of the sore throat. When that is simple, the whole case is mild; when, on the other hand—as unfortunately too often happens—the affection of the throat is severe, the whole case partakes of the same nature.

The eruption of scarlet fever is usually visible on the second day from the occurrence of shivering and other symptoms of indisposition; during the two following days it continues to increase in distinctness; and for other two—that is, four in all—its brilliancy is marked. Thereafter it begins to decline, and usually before the eighth day it has so far faded as to be with difficulty recognized.

A few days after the disappearance of the eruption, there

commences a peculiar change—one which is to a great extent characteristic of scarlet fever—namely, a separation of the cuticle or scarf-skin over the surface of the body. This process, to which the name of desquamation is given, occurs earliest and most decidedly in those instances in which the previous eruption has been most florid and abundant. From the palms of the hands and soles of the feet the thick skin separates in large pieces; from the rest of the body, in smaller flakes, or in the form of scurf. The desquamation in scarlet fever is of the utmost importance; and it is well to consider no sufferer from the disease otherwise than an invalid till the process is fairly completed. Not unfrequently, the end of the fifth week from the commencement of the disease is reached before the cuticle has been entirely separated; though by suitable means its removal can be hastened. While the process lasts, the patient is peculiarly susceptible to the influence of cold, and every means should be taken to guard against exposure.

In some of the severe cases of scarlet fever, the rash is apt to be developed late in the disease; to assume a livid or purplish hue, instead of the florid colour which marks the true eruption; and further, after it has appeared, suddenly to recede.

The tongue offers a marked peculiarity in scarlet fever. During the first and second days it is usually coated with a white fur; through which, however, and more especially towards the point, there appear small bright and shining elevations, the altered papillæ of the organ. Later in the disease the fur disappears, and then the tongue presents a uniform red colour; while at a still more advanced period, in the more serious cases, it becomes dry and cracked—sometimes black in appearance, like the tongue in typhus fever.

As has already been observed, one source of danger in scarlet fever arises from the condition of the throat. This part of the body is affected in all cases of scarlet fever; but in mild examples, beyond a feeling of uneasiness in swallowing, there is no complaint made by the patient, and in appearance there is merely redness of the tonsils, palate, and



parts in their neighbourhood, with perhaps a little superficial ulceration on one or other tonsil. But in very various degrees does the throat participate. From the slight affection just described, there are intermediate grades; up to that appalling malady which has been well named Malignant Sore Throat, in which not merely ulceration occurs, but actual sloughing or destruction of the part affected. And it is not limited to the throat, but involves the nostrils—attended by the formation of an acrid humour, possessing a most offensive smell. Such cases are usually fatal. And there are others in which the mischief in the throat is less severe, but the disease is from the outset accompanied by a low form of fever. And in these, also, death often occurs. The glands of the neck become greatly swollen in certain cases, especially in those where much throat affection exists; and considerable embarrassment to the breathing may be the result.

It is very important to remember, that after scarlet fever there are certain affections—some of a very serious nature—which may be, and often are, developed. Such are termed *Sequelæ*:—

Foremost among these, in the frequency of its occurrence, and by reason of the danger which attends it, is dropsy. It is chiefly, though by no means exclusively, in the young subjects of the disease that dropsy occurs: the author has known dropsical symptoms to succeed scarlet fever in the adult; and similar cases must be familiar to many physicians. It is during the progress of desquamation of the cuticle that the dropsical swelling is apt to come on: when that process is completed, the risk of its occurrence is almost entirely removed. The development of dropsy is generally preceded by certain sufficiently well-marked symptoms: languor; headache; loss of appetite, which may have been completely restored after the subsidence of the fever; and very specially by a diminished, perhaps entirely suppressed, secretion of urine. In this state of the patient, even more alarming symptoms may come on—convulsions, or extreme drowsiness, indicating a poisoned state of the blood acting on the

brain, and determined by the failure of the kidneys to remove certain noxious matters from the system. When dropsical swelling appears, it is usually first noticed about the ankles, or over the shins, or on the face, under the lower eyelids; but when it increases, other parts of the body become its seat, and there not uncommonly occurs dropsy of the chest. The latter is apt to take place suddenly, and to be accompanied by much difficulty of breathing, and other symptoms.

Among the other sequelæ of scarlet fever are permanent enlargement, often ending in suppuration, of the glands of the neck, and deafness: the latter condition not unfrequently being found in connection with a discharge of matter from the ear—itself a source of great annoyance, and, so long as it continues, not free from danger.

The contagious nature of scarlet fever admits of no doubt; and numerous examples are on record in which the contagion is proved to be of a very remarkable intensity, and capable, under favourable conditions, of retaining its power for long periods.

In the treatment of scarlet fever, it were well always to hold in remembrance that the disease is one, even in its mildest form, calling for much care and circumspection. It is true that in the simplest cases of the disease, beyond confinement to bed during the eruptive stage, and attention to the state of the bowels, little remains to be done,—that little including the employment of some gentle diaphoretic medicine, such as *mindererus* spirit, and the enforcement of a low diet; but as experience has abundantly proved that the occurrence of dropsy is just as common, perhaps more so, after a slight as a severe attack of scarlet fever, from the circumstance that probably less care has been exercised in the former after convalescence had commenced, it comes to be a matter of duty to regard every sufferer from scarlet fever, no matter how slight, as an invalid until a certain period (not less than four weeks) from the commencement of the attack has passed. During this time the patient need not be confined to bed, but he should strictly keep the house,

while the temperature of the apartment he occupies is carefully regulated, not being allowed to become lower than cool; and the diet, which may with propriety vary in different cases, is in none otherwise than light. In those instances in which the eruption is not early and fully developed, the best means for encouraging its appearance is the hot-bath. When the febrile symptoms are high, when the heat of skin and thirst are great, and there are headache and delirium, tepid sponging over the whole body will be grateful, and the application of cold to the shaved head, with, in some very extreme cases, a few leeches to the temples, are appropriate remedies. The bowels should be acted on at the very commencement by a mild aperient. For the thirst, the patient may be allowed to drink lemonade, or effervescing powders, containing citric acid (15 grains) and bi-carbonate of soda (20 grains). Much benefit results from the use of certain substances as gargles. Of these, chlorine, in the form of chlorine water, may be strongly recommended (one or two tablespoonfuls in a tumblerful of tepid water, used repeatedly); Condyl's fluid, a drachm to six ounces; or a strong solution of boracic acid; or a solution containing two grains of quinine to the ounce of water. In the case of a child unable to employ a gargle, a little of this mixture may be carefully injected into the mouth, or applied by means of a spray-producer. The internal administration of chlorine in one or other form (as, for example, chlorate of potash) may prove serviceable. The feeling of sore throat, as well as the glandular swelling in the neck, are to be benefited by the assiduous application of warm fomentations or poultices. There are many cases of scarlet fever which, from an early period, perhaps the very commencement, require a liberal allowance of stimulants; and under the use of wine some recover which would otherwise undoubtedly perish. Such cases are marked by great prostration of strength, and an imperfect development of the rash. The progress of desquamation is expedited by the employment of the warm bath: this, if the patient be weak, must be ventured upon with caution; otherwise the comfort afforded is great, and its



indulgence may be permitted every alternate evening, the patient passing therefrom directly to bed: but from the very commencement of the process of desquamation, it is well to rub the whole body over once or twice a day with camphorated oil, both with the view of furthering the process and diminishing the risk of the patient sowing the poisoned cuticle wherever he goes. Every convalescent from scarlet fever should be clothed in flannel. During convalescence the use of butcher-meat, even when the appetite is good, should be very limited. For the dropsical affection,—whether to ward it off when threatening, or remove it when it has appeared,—the best means are the warm bath, as a sudorific, and free purging, specially by the compound jalap powder (a scruple to a drachm at bed-time in warm gruel),\* and mild non-irritating diuretics, such as digitalis. When the dropsy has subsided, the patients are generally benefited by iron.

The author has nothing to say in favour of the preventive or curative influence of belladonna in scarlet fever. Sufficient evidence has not yet been obtained to determine the truth of Dr. Brakenridge's opinion, that the sulpho-carbolate of soda, given in twenty-grain doses every four hours, or three times a day, is an efficient preventive, destroying the germs of the disease in the blood. If the impression produced by his researches be confirmed by extended experience, the discovery will prove of the utmost practical importance. ✓

**SCIATICA**, a form of neuralgia, so named from the pain taking the course of the sciatic nerve down the hip and thigh.

Like other neuralgic affections, the proper treatment of sciatica will depend in great measure upon the constitution and habit of body of the person attacked. When accompanied by feverishness and other inflammatory symptoms, cupping over the part, and afterwards blistering, or the

\* The sudden occurrence of convulsions, in connection with the suppression of urine, is to be met by very active measures,—blood-letting, general and local, and free use of purgatives.



application of the heated iron (Dr. Corrigan's cautery), are the most likely means to remove it. Sciatica is often connected with rheumatism or with gout; and in such circumstances may be removed by the use of those remedies which prove serviceable in the general disorders. It occurs in persons of broken-down constitution; and when so, tonic medicines, quinine and iron, should be used. It frequently requires the use of morphia, by Dr. Wood's hypodermic method. And benefit results, when other things fail, from the use of electricity, particularly the constant current.

**SCROFULA** (from the Latin *scrofa*, a breeding sow; so called on account of the fancied analogy between it and an affection peculiar to swine), Struma, or King's Evil. The condition of scrofula is common to certain persons; and, when they possess it, they are said to be scrofulous. During early life such have pale, flabby, pasty-looking complexions, large heads, narrow and often malconstructed chests (chicken-breasted), with protuberant belly, a soft muscular system, and feeble, languid circulation. These are the characteristics of the leucophlegmatic temperament; but the scrofulous constitution is not confined to that temperament alone—it may be present with the sanguine and melancholic. In the former it is indicated by light red hair, long eyelashes, sluggish generally dilated pupils, fair brilliant skin and complexion. Such children are often clever, indeed quite precocious; they cause the flattering hopes of parents, but gloomy forebodings to the physician. In the latter the mental state is sluggish, the skin dark and muddy, the bodily energies defective. In those persons whose chief characteristics have thus been noticed, scrofula, in a marked form, is apt, sooner or later, to be developed.

As indications of the actual existence of scrofula, there is ophthalmia—as already mentioned under that head, p. 174—blear-eyed, or, what is very common, with ulcers on the cornea; swollen lips, specially the upper; thick nose; white swellings of joints; enlargement of the external glands, particularly those in the neck (this was the true king's evil).

These glandular swellings often suppurate, and abscesses form. Besides these manifestations, there are various chronic eruptions of the skin, and among these some of the more lasting and intractable. An individual presenting any one of these indications, but specially a combination of two or more, may be said to have scrofula—to be scrofulous: so affected in childhood, he is very likely, at a more advanced period, but before full maturity is reached, to become affected by consumption. Generally speaking, the glandular affections are the most distinctive of scrofula.

In the way of treatment, much good is often to be done; but, owing to poverty and privation, numbers of persons who might possibly have been saved are cut off. Fresh air, warm clothing, cleanliness in person, generous diet, are the chief particulars; and as adjuvants rank the whole series of tonic medicines,—more particularly may mention be made of cod-liver oil. The preparations of iron and iodine (syrup of the iodide of iron) are also useful, and various others to which it is unnecessary here to refer.

**SCURVY**, or Scorbutus, an affection in which the blood is depraved, is characterized by a state of general feebleness and incapacity for exertion, with livid spots or patches over the surface of the body, and particularly the limbs,—parts of these are, moreover, swollen, hard, and painful; there is bleeding from the gums on the slightest degree of pressure, and a tendency to hemorrhage from, and ulceration of, other mucous surfaces; the breath, too, is very fetid.

This combination of symptoms is, for the most part, induced by a very limited range of diet; but excessive fatigue and exposure, with mental depression, also serve, in an important manner, to produce it. Scurvy, in former times, has often manifested itself on board ships at sea, where its appearance was owing partly to the almost exclusive use of salt provisions, but mainly to the deficient use of fresh vegetables.

The preventive treatment is of most importance in scurvy. Lemon juice has been incontestably proved to possess, in a

high degree, what are called antiscorbutic virtues; and now no ship starts on a long voyage without a sufficiency of this important article. When the disease has appeared, the patient should be confined to bed, if the general constitutional disturbance be considerable; otherwise, moderate exercise in the open air, active or passive, is to be recommended. He should drink freely of lemonade; and, for diet, have, in addition to a due amount of the most easily digested and well-cooked animal food, farinaceous and vegetable substances—among the latter potatoes, and what greens are to be had. If the patient have no appetite for butcher-meat, or if, as is for a time not unlikely to be the case, the state of his mouth, gums, and teeth prevent the proper mastication of animal food, then soups, milk, and wine may be substituted. Wine is indeed required in all cases attended by much debility. The tendency to constipation of the bowels should be met by the use of suitable laxatives, castor oil and rhubarb. The bleeding gums may be washed with solutions of astringent substances, such as acetate of lead, or nitrate of silver, or sulphate of zinc; and, if bleeding from the bowels occurs, opium with acetate of lead is to be administered internally. The swollen and hardened condition of the limbs, which is generally attended by considerable suffering, is relieved by warm fomentations, or by the application of such soothing means as warm olive oil, or the chloroform liniment.

A somewhat analogous disease to Scurvy, is the so-called PURPURA, which is characterized by the appearance of small dark red or purplish spots, named petechiæ: these are due to the extravasation of blood beneath the cuticle, and do not disappear on pressure. Besides this cutaneous bleeding, there is, in all cases of purpura, a tendency to bleeding from the mucous surfaces, nose, mouth, ears, stomach, bowels, &c. Cases of this nature may be simple, requiring little medical interference; or, as happens from time to time in young children possessing a peculiar constitution, they are very serious, and not unfrequently terminate in death.

When instances of purpura occur in connection with a de-



fective hygienic condition, something may be effected by removing the patient from an impure and polluted atmosphere to one where pure air abounds; and substituting for imperfect food a nutritious and easily digested diet—farinaceous alone, in the first instance. When the system is enfeebled, wine is required. Attention to the bowels is of great importance: usually constipation exists; this is best overcome by doses of Henry's solution of magnesia. Beyond a careful regulation of the digestive organs, the most useful remedies to employ are the mineral acids (for example, the nitrohydrochloric), in small and frequently repeated doses; or, when the case proves persistent, the tincture of the muriate of iron. When bleeding from the gums or bowels occurs, the same means for its arrestment are to be used as those mentioned under Scurvy. When febrile symptoms exist, the diaphoretic medicines will prove serviceable.

**SEA-SICKNESS.** This is a form of sickness unknown to certain individuals, from which, however, many persons suffer, but suffer in very different degrees. Some pay the penalty only on the first occasion of making a sea voyage; others, on every sea journey they undertake. As a general rule, the sickness subsides, if not before the conclusion of the voyage, at least as the ship enters the calmer waters of a port. It is not always so, however: the attack may be of extreme violence, leading to rupture of some small vessels, and escape of blood; and it may last long after the completion of the journey by sea.

Sea-sickness, or, as the French name it, *mal de mer*, is similar to the sick qualm or nausea which is induced on *terra firma* by swinging or by turning rapidly round. In some it is accompanied by headache, and in others a very uneasy sensation about the stomach takes the place of the vomiting. The influence of the mind is very important, both in the production and prevention of sea-sickness: the determination not to be sick ("navigare sine timore et nausea") goes, in the resolute, a long way: the feeling that it must come on, speedily leads to it.



One of the best means of counteracting the tendency to sea-sickness, is the assumption of the horizontal position. A little chloroform has lately been suggested as a good remedy (five to ten drops on a piece of white sugar). Vomiting is rendered easier by having something of a light nature in the stomach—a little lemonade or soda-water; while the addition of a little brandy to the latter seems, in many, to produce a good effect.

**SHINGLES** (from the Latin word *cingulum*, a girdle), an eruptive febrile disorder, in which small vesicles appear encircling half the circumference of the body, and scarcely ever passing round the whole body. The upper part of the back, under one shoulder, may be the level; or the eruption may occupy as low a position as the hip and thigh. Women, and chiefly those advanced in life, suffer more frequently than men. In the great majority of instances, it is the right side of the body which is affected.

The affection is generally ushered in by shivering and deep-seated pain in the back: sometimes the latter symptom continues after the eruption has appeared, and lasts after its declension. The eruption usually continues for about ten days; but if fretted in any way, as by picking off the tops of the small vesicles, little ulcerations may be formed, and these are, at times, difficult to heal.

The disease is to be treated by means of the ordinary febrifuge remedies, gentle laxatives and the mindererus spirit. The warm bath and anodyne liniments tend to relieve the pain of the back when more than ordinarily severe.

**SMALL-POX.** This unseemly, and at times malignant, disease is happily now by no means so prevalent as formerly. Through the genius of the distinguished English physician Dr. Jenner, an antidote, in the great majority of instances sure and efficacious, is known in vaccination. This disease belongs to the class of general febrile disorders; it is characterized by an eruption over the skin, which, at the first

papular (like little pimples), becomes vesicular (deposits of serous fluid under the cuticle), and afterwards pustular (the serous fluid changed into matter). Small-pox is distinctly contagious, and from time to time assumes a decidedly epidemic character.

The invasion of small-pox, as of other febrile diseases, is preceded by a period of incubation, the duration of which is usually from four to eight days, though it may be longer. During the premonitory stage which follows, the most remarkable symptoms, after the occurrence of shivering, are headache, pain in the back, and nausea, or vomiting. To these succeed heat of skin, and quickness of the pulse; and then, usually in the course of twenty-four hours or two days, though a longer period may elapse, the eruption appears, at first on the face and upper part of the body, and then on the trunk and lower extremities. With the appearance of the eruption, the pain of the back, headache, and sickness decline; and for a time, at all events, the patient feels much more comfortable. The eruption may be profuse, the pustules, when formed, running together: this is most apt to occur on the face. When it exists, the disease is called confluent; when, on the other hand, the eruption is much less in amount, and the great majority of the pustules are perfectly distinct and isolated, it is termed discrete. The former is the more serious affection. In it, about the eighth or ninth day after the eruption has manifested itself, a renewed feverish condition of the patient is established, simultaneously with certain changes which are taking place in the pustules of the eruption. This lasts for a few days, and then occurs the blackening and drying of the eruption: scabs more or less dense, according to the degree of its confluence, form and separate, leaving, not unfrequently, cicatrices: the deformity thus resulting is called the pitting of small-pox.

It is comparatively seldom that small-pox now appears in a malignant form; but, nevertheless, from time to time, cases meriting that appellation present themselves. In such, the premonitory symptoms are generally unusually severe, specially the pain of the back and vomiting. The eruption

is tardily manifested; and when it does appear, the rapid advancement visible in the ordinary cases of the disease does not take place; the pustules do not rise, or fill, as it is said; while not unfrequently blood appears in them; and bleeding, too, takes place—perhaps from the nose or mouth, it may be from the bowels. Fortunately the effect of vaccination is not merely to prevent the occurrence of small-pox, but, in a very remarkable manner, to modify it when the disease does appear.

The simpler cases of small-pox, unattended by much eruption, scarcely require any further treatment than confinement of the patient to the house, generally to bed, the exhibition at the commencement of a dose of laxative medicine, and, until the eruption appear, of a diaphoretic. In more severe cases, there are individual symptoms of an unfavourable nature not unlikely to be developed, and these must be met. The imperfect filling or maturation of the pustules is generally accompanied by a low form of fever, requiring the use of stimulants—wine and brandy; these must, of course, be administered with great caution. When the febrile excitement, after the filling of the pustules (about the ninth day), runs high, the use of opium (solution of the muriate of morphia) alone, or with a little antimonial wine, often succeeds in allaying the general disturbance, and particularly the wakefulness, restlessness, and even delirium which accompany it. In all stages, if the patient present a sunken look and the pulse be feeble, the employment of stimulants is indicated.

To prevent the itching over the skin in the early and later stages of the eruption, various applications have been recommended: perhaps the simplest, as well as best, is olive oil gently smeared over the face by means of a camel-hair pencil. For the same purpose, and as likely to prevent the occurrence of pitting, at least to the full extent, a solution of nitrate of silver (two drachms to the ounce of distilled water) has been recommended to be applied from time to time. Nothing leads more certainly to the deformity, which it is so important, if possible, to avoid, as the picking by the



patient of the pustules during their later stages. In the instance of children, it is well to prevent this self-mutilation by tying the hands, or placing them in bags.

**SNUFFLES.** In the adult, a cold in the head frequently entails a considerable amount of suffering and inconvenience ; it never gives rise to danger. In the young child, however, it is otherwise : a common enough form of cold in the head, in such subjects, passes under the vulgar denomination of “the snuffles ;” because, the mucous membrane of the nose being much swollen, the child is no longer able to breathe through its nose, as it was accustomed to do, but is compelled to draw breath through its mouth : its difficult inspirations are, in such circumstances, accompanied by a peculiar snuffling noise, which in sleep is converted into a regular loud snore. When respiration through the nose is greatly impeded and interfered with, owing to the thick incrustations round the nostrils which are formed by the discharge, the child is unable to suck ; and if applied to the breast—as an incautious nurse is sure to do—it will scarcely have seized the nipple and commenced, when a threatening of suffocation compels it to desist. The discomfort of the child’s condition is greatly increased from the mouth being kept constantly open in order to respire ; thus the throat and tongue become dry, and the act of swallowing rendered difficult. Though the general febrile disturbance attending the snuffles is often considerable, it is very seldom, indeed, that any anxiety arises from that source : the danger of the child’s condition lies in the local affection.

In the treatment of this disease it is desirable that the child should be taken from the breast and fed with the spoon ; it may still be nourished by its mother’s or a nurse’s milk : its nurse should be a careful person. If the fever be marked, a few drops of the mindererus spirit, with a drop or two of ipecacuanha wine, may be given at intervals of a few hours. A little castor oil should be given in order to move the bowels. If the child appear to be becoming low and depressed, then a little wine may be required. To so



young a child, wine is best administered in the form of white wine whey (a tablespoonful of wine with three tablespoonfuls of new milk are boiled together, and then strained). Local applications to the nose are sometimes beneficial: of these, nitrate of silver (5 grains to the ounce of distilled water) and alum (20 grains to the same quantity) are the best.

**SOFTENING OF THE BRAIN** is, properly speaking, not so much a disease itself as the consequence of certain morbid conditions. One form of softening is intimately connected with inflammatory action, and others are quite unconnected with such; the latter, while sometimes consequent upon extravasation of blood into a portion of the brain, sometimes upon obstruction of blood-vessels, may also occur as a gradual process, equally independent of that condition and of inflammation. Though not a consequence, softening of the brain is, in many instances, a forerunner of apoplexy, owing to the disease of the blood-vessels of the part with which the softening of the substance of the brain, and escape of blood into it, are intimately connected.

The symptoms of softening of the brain are various, owing to the different positions in which it is found, as well as the particular action, inflammatory or otherwise, on which it depends. While this is true, it is equally so that a certain train of phenomena has, in so considerable a number of instances, been noticed during life, as to lead to a general impression that some, at all events, of the symptoms it includes will usually be found. Gradually advancing palsy, with failure of the mental power, the latter manifesting itself in different ways, are among the number.

The treatment of such affections must include attention to the general state of the patient, with freedom from all anxiety, cares of business, and all kinds of excitement.

**SORE THROAT.** The most common form of sore throat is the affection, acute in its nature, of the tonsils. These bodies, two in number, visible at the back part of the mouth

when it is opened, are affected by inflammation; they become red and swollen, and, as a consequence, there is considerable pain, and difficulty of swallowing, with thickness of speech. Obstruction to the breathing is a rarer symptom, but in very severe cases it too occurs. With the local affection, but varying, of course, according to its degree, there is always febrile excitement, hot skin, and quickness of the pulse. The tongue is coated, and the bowels generally confined. Usually one tonsil is first affected; and after a day, perhaps even less time, has elapsed, the other participates in the inflammation.

When the pain in the throat and the swelling are great, it may be necessary to apply leeches, but usually the diligent employment of hot fomentations, or the application of a mustard poultice, proves sufficiently efficacious. The inhalation of the steam of hot water, or a simple gargle of lime-water with milk, or very weak chlorine-water, is useful in the early stage. The bowels should be freely opened by laxative medicine (castor oil, or fluid extract of senna), and a diaphoretic administered from time to time. Unless very severe, the inflammation of the tonsils in an acute form does not last for more than a few days; but the disease is apt, at times, to assume a chronic form; and the tonsils, one or other, perhaps both, remaining for a time enlarged, may require the application of a solution of nitrate of silver, or an alum gargle, or one of vinegar and port wine, and perhaps the application of a rising blister to the neck over the affected tonsil.

Another not uncommon variety of sore throat is the ulcerated. In this disease the ulceration usually exists on one or other tonsil. Sometimes, in connection with the progress of ulceration, there is a good deal of fever, but in other cases there is comparatively little constitutional disturbance. Local applications are of great service in the treatment of ulcerated sore throat, and specially the application of the solid nitrate of silver, or of the sulphate of copper in substance. Other means must not be neglected, but usually after one or other of these has been applied, the ulcerated surface takes on a healing character.

Inflammation in the throat is further apt to terminate in the formation of matter or an abscess. This is called a suppurating sore throat. The timely employment of the anti-phlogistic regimen, and suitable treatment, may, in some cases, prevent the formation of matter. When it has formed, its existence is recognized by the soft swelling on one or other side of the throat; and if there be much difficulty in swallowing, it is right to open this bag of matter with the lancet. In doing this, the body of the lancet should be covered with a portion of lint rolled round it, the point alone being free. Frequently the matter itself finds vent. The application of warm bran or linseed meal poultices to the throat, and warm gargles, or the inhalation of steam, favour the progress of such collections.

Certain other forms of sore throat have been noticed under the heads of *Diphtheria* (p. 95) and *Scarlet Fever* (p. 190).

**SPITTING OF BLOOD** is always to be regarded as a serious symptom. Allusion has already been made to its frequency in connection with tubercular disease of the lungs, or consumption (p. 56). Such is, undoubtedly, its most frequent cause. Spitting of blood also occurs as a consequence of disease of the heart, chiefly of valvular disease of the heart, in which there is interruption to the proper progress of the blood through the organ, when the current is thrown back on the lungs. Sometimes it is produced by the rupture of an aneurism or tumour connected with an artery (in this case the aorta, or main artery of the body), and dependent on disease of its coats. The occurrence of such bleeding usually proves fatal; but cases present themselves from time to time, in which a small bleeding takes place, perhaps once or twice, it may be repeatedly, before the sudden and overwhelming gush which extinguishes life. But, while disease of the lungs or heart is the most common cause of spitting of blood, this symptom does occur independently of any real disease in either of these organs. In hysterical females, and in women suffering from derangement of the menstrual function, such has been noticed; also, though very rarely, in the sufferers



from scurvy and purpura; and in a greatly impoverished condition of the blood, or anæmia. These must, however, be looked upon only as exceptional cases; and, even in some of these, the exact source of the bleeding is open to doubt: for it may be found, on a more careful inquiry, that blood, supposed to have come from the lungs, has in reality had its origin in the mouth, nose, or throat. Reference has been made, under the head of *Consumption* (p. 71), to the treatment of spitting of blood in that disease. In all cases where it occurs, perfect tranquillity of the patient, if possible, should be secured.

**STONE IN THE BLADDER.** While a calculus or stone may form in the bladder, the more usual event is for the concretion which has passed from the kidney to undergo increase in the bladder. The chief symptoms of stone are increased desire to make water, with more or less pain in making it. The pain, too, is experienced after the bladder is emptied. The flow of water is subject to sudden interruptions, and blood at times appears. The irritation produced by the presence of a concretion often gives rise to symptoms at a distance; of which pain in the back and lower limbs, and sickness, are the most common.

Stone occurs at all periods of life, but is much more frequent in some countries, and in certain parts of countries, than in others; dependent, no doubt, on the nature of the food, and specially the water used by the inhabitants.

The chemical characters of urinary concretions vary considerably, and on them depends, to a considerable extent, the precise character of the patient's sufferings. It is of great importance to determine, by a careful examination of the urine, what the real nature of the stone is, when, by the introduction into the bladder of the instrument or sound, its existence has been determined. This is not always possible; but, if attainable, a suitable plan of diet and regimen may be suggested, in those instances in which, from one circumstance or another, the surgeon hesitates to perform the operation for the removal of a calculus, known as lithotomy.



**TEETHING.** The time of teething or dentition is always to be looked upon as one of more than ordinary peril to the young child. True it certainly is, that not a few pass through the period of teething with little or no disturbance; yet, though a perfectly natural process, dentition is almost always attended with some amount of suffering; and during it, their earliest trial, a considerable number of infants actually perish. It is more correct to speak of the period of dentition being one of anxiety, than of the process of teething itself being such; for the latter is properly to be regarded as one, perhaps the most important, still only one of a series of changes which are being at the same time accomplished,—changes which mark the transition from infancy to childhood.

The first indication of the approach of the teeth is an increased flow of saliva into the mouth. That of a very young child is almost dry; and in trifling febrile complaints of infants the tongue becomes perfectly dry. Very different is it about the fourth month, or from that to the fifth; the mouth then becomes full of saliva, and the secretion is observed, at all times, to trickle or even to run over the chin from the angles of an even closed mouth.

The formation of the first teeth; or, as they are called, milk or deciduous teeth (from the Latin *deciduus*, that which falls off), has been going on before birth; the completion and appearance—in medical phrase, the eruption—of the milk teeth succeeds the increased flow of saliva just referred to. These teeth are twenty in number, and they usually appear in the following order:—The central front teeth (central incisors) come first, generally about the seventh month after birth, sometimes before; while not unfrequently, without any injury to the child, their appearance is considerably retarded. The two front teeth in the lower jaw usually, though by no means invariably, come the earliest, before the two in the upper. About the eighth month, or between that and the tenth, come one to either side of the two teeth in the upper or lower jaw (lateral incisors). The next in succession are the larger teeth, grinders (molars); these, to the number of four, appear after the twelfth month, the lower

usually, though far from invariably, first, leaving a space between them and the lateral incisors to be supplied, between the fourteenth and twentieth months, by the four sharp-pointed teeth (canine): and, last of all, at a period varying from the eighteenth month to the termination of the third year of age, come the back grinders (posterior molars); making the total number twenty.

The period during which these changes in the mouth are going on, embracing the three earliest years of the child's life, but more especially the foremost portion of dentition, is not unfrequently one of considerable risk. If an irritable condition of the nervous system has been established and maintained through the use of unwholesome food—that may have been the mother's or a nurse's milk alone; if the atmosphere in which the child has lived has been impure; or if in any other way the health has been disordered,—the risk is very materially increased. Under such circumstances, the degree of irritation produced during the progress of the teeth, and before their eruption occurs, is often extreme. Much pressure is of necessity exerted upon the nerves of the gum, disturbance of the whole system is apt to be produced, and convulsive affections occasioned, which are not uncommonly fatal (see *Convulsions*, p. 72).

For the treatment of the condition now referred to, the irritated and oftentimes inflamed gum, upon which consequences so serious hang, the free use of the gum lancet has been strongly recommended, very specially by a highly distinguished physician recently deceased, Dr. Marshall Hall, who made the derangement of the nervous system a particular subject of study. And no doubt its employment, in many cases, brings speedy relief. In endeavouring to remedy the local irritation care must, however, be taken not to neglect or overlook what is of infinite importance—namely, the deranged condition of the general system: change of air, alteration and improvement in diet, are in such circumstances as those already indicated equally demanded. In infants whose general health is good, and who are not over-fed—for over-feeding is a fruitful source of difficult dentition

—the eruption of the teeth is a comparatively easy event ; a slight febrile disturbance, sometimes not even that, occurs for a day or two antecedent to the appearance of each tooth ; not uncommonly, in healthy and well-managed infants, the whole twenty take their places in the gums without costing the little one a single hour's loss of sleep.

It is further of importance to bear in remembrance that any existing malady, any abnormal tendency, is apt to be more fully developed during dentition. If the existence of any such tendency have been determined, then very specially should care be taken that the infant is removed during the period of dentition, the whole period, from all injurious influences ; let diet then be more than ever regular ; let it be seen that no deficiency of fresh air exists—a condition apt at all times to operate disadvantageously, but at none more seriously than then.

But while there is room for great circumspection and care in the management of children during the period of teething, it would be wrong to suppose, and still more so to act upon the supposition, that all diseases which come on during that time are intimately connected with this important process, or with the general changes which are taking place in the organism as the infant passes into the child. It is a bad practice to employ the gum lancet and scarify the gums when the slightest disturbance exists in any part of the body, if the teeth are not through. When unnecessarily performed, scarification is often followed by the formation of a cicatrix, more or less dense, in the gum, through which the tooth passes with greatly increased difficulty. On the other hand, when an infant is evidently suffering much, not only thrusting everything its little hand can reach and guide into the mouth, but is fretful and restless, with a flushed countenance and increased heat of skin, and a tooth or teeth can be felt in the gum, so nearly through that in a day or two at latest they probably must appear ; in such circumstances the gum lancet may be used, the tooth or teeth cut down upon, whereby no little suffering to the child is saved. And so also when the gum feels very full and looks red,

still more if it appear dark red, the lancet may be used, indeed should be used, to allow the escape of a little blood; and the operation may, for the same purpose, be repeated. Further: when there is much constitutional disturbance, feverishness, or diarrhœa, the gums may be lanced: by so doing these symptoms will often decline, though there be no appearance of the teeth for weeks. Lastly: according to an eminent physician, Dr. West, whose precepts have been embodied in this short discussion regarding the use of a valuable though oftentimes abused instrument, when there occur sudden convulsions, apparently unconnected with any particular morbid condition, and if not traceable to the state of the gums, then, as it would seem, causeless, the gums may be freely lanced, provided dentition be really advancing. To determine this, the number of teeth the child already has must be made out by examining the mouth, if that be possible, or from the testimony of the mother or friends; for during the periods of inactivity which occur after some teeth have appeared and before others arrive, it is unlikely that the state of the mouth causes the convulsions, and in such circumstances scarification is uncalled for. If teething go on naturally, there is no occasion for interference.

An infant's food, during the process, should always be light; and there should be no sudden change of diet till one or other of the periods of comparative cessation in the progress of dentition is reached.

When the child is feverish, the warm bath and a small dose of *mindereus* spirit will be useful. The heat of the child's mouth may induce the desire for the breast too frequently, in order to obtain the grateful relief of moisture: in this there is need of caution; a little lime-water or barley-water may at times be given instead.

The best articles of diet for the weaned child during the active progress of dentition are arrow-root made with water, a little sweet milk added; and isinglass dissolved in equal parts of milk and water, so as to resemble arrow-root in consistence.

If the bowels are disordered, as they are apt to be, let a



gentle laxative be first administered,—under a teaspoonful of castor oil: after its operation a little lime-water may be given,—a teaspoonful repeatedly. To a child under a year, half a grain of Dover's powder may be administered night and morning; to one older, a grain.

If the child have difficulty in making water, the warm bath often brings relief; and in addition, a few drops of the wine of ipecacuanha, and one or two drops of the liquor potassæ may be given. (For the treatment of *Thrush*, see under that head, p. 213.)

When the gum is exceedingly red and swollen, a leech may be applied at the angle of the jaw, as in such a condition the employment of the lancet would be extremely painful, and unhealthy action in the gums might follow its use.

During the progress of teething, certain forms of scalp eruption are very prone to appear, more particularly one which, in the first instance, consisting of minute vesicles, is afterwards, by their rupture and the escape of their watery contents, converted into a thin scab; which scab, becoming dry, in time separates: fresh vesicles, however, appear, and the head is at one part and time dry, at another moist. The ears generally are swollen, and behind them there are cracks with watery fluid occupying them. In another form of eruption the scab over the scalp is much denser, from the rupture of little pustules. The hair, in both forms, assumes an unhealthy appearance, lying matted on the head, and often dropping out. These eruptions, in course of time, almost invariably and entirely disappear, leaving no traces behind. The popular belief is that they are beneficial; and whether this notion is correct or otherwise, certainly, while teething progresses, they should be only very cautiously interfered with.

When very dry, a little glycerine will relieve the disagreeable, it may be painful, irritation they occasion. When, on the other hand, they are moist, a little flour or violet puff may be dusted, particularly behind the ears and over the neck, down which the variety first described is apt to creep. Should they continue after dentition is complete, and the

means now mentioned prove ineffectual, an alkaline lotion (carbonate of soda, half a drachm to a drachm, in eight ounces of water) may be alternated with the glycerine; the former when the head is moist, the latter when dryness of the scalp exists—the head being at the time protected from the atmosphere by a covering.

The milk or deciduous teeth are in course of time replaced by the permanent teeth. The appearance of the latter commences usually in the seventh or eighth year. When complete, there are thirty-two teeth in all; sixteen above, and the same number below. While the changes taking place in the mouth of the child during the second dentition are not attended by an equal or the same constitutional affection as so often occurs in that of the infant during the first, there is often room, while it continues, for increased watchfulness and care. In those who are predisposed, various nervous affections, as chorea and epilepsy, are not unapt to be developed; and unless care be exercised, the general health may become more or less depraved.

**THRUSH** is an affection of the mucous membrane of the mouth, common in young children, and more particularly so during the period of teething, characterized by the presence of white spots or patches coating its surface. When these are removed, the membrane below is found red and inflamed in appearance, but unaffected by ulceration. On the absence of ulceration in thrush depends the distinction between it and aphthæ (from the Greek *aptein*, to set on fire), also a common affection of the same part.

In the treatment of this disorder, attention should be paid to the state of the general system, particularly the stomach and bowels. Small doses of magnesia, and the use of lime water, will be found useful. Diet should be nourishing but light. The application of a solution of nitrate of silver (20 grains to the ounce of distilled water), or, as recommended by Sir William Jenner of London, of sulphate of soda (60 grains to the ounce), will be found advantageous. The same treatment is suitable in aphthæ, which is very

generally associated with diarrhœa. Both forms of disorder are not uncommon in the advanced stages of many lingering complaints ; consumption, for example.

**TIC DOULOUREUX.** The seat of pain in this most painful of all nervous affections is in the facial branches of the fifth pair of nerves—nerves of sensation to the face. The nerve has three branches to the face ; and according to the one affected is the exact locality of the pain—over the forehead, under the eye and over the cheek, or along the lower jaw. The second of these is perhaps the most frequent, but it is often associated with the first.

In persons who are apt to suffer, the paroxysms of tic are induced by very slight exciting causes, such as a draught of cool air, or a sudden noise, or even a gentle touch over the part.

Tic may exist in persons who otherwise enjoy perfect health ; but this is not usual. This severe pain generally attacks those who are in some way or other debilitated in body. It is undoubtedly frequently engendered by exposure to malarial influences. Sometimes its origin is purely local : a diseased portion of bone in contact with a branch of the nerve causes the agonizing pain. Not unfrequently its occurrence is intimately connected with the rheumatic or gouty habit, and in such relation is to be benefited by anti-rheumatic or anti-arthritic remedies.

When manifesting, as it not uncommonly does, a marked periodicity—departing and returning at similar hours on succeeding days—quinine is likely to be useful. It should be given in doses of five grains or upwards, some short time before the anticipated occurrence of the paroxysm. Bibberine and arsenic,—which possess similar though not so potent virtues as quinine—may also be employed ; but the latter is only to be administered in the manner mentioned in the Appendix. In the treatment of all cases, great attention should be paid to the state of the stomach and bowels. The latter are often confined ; and a small dose of purgative medicine (a drop of croton oil) sometimes is sufficient to

allay, if not to remove the pain. When tic is associated with a debilitated habit of body, iron is a serviceable remedy (carbonate of iron, 30 to 60 grains, thrice daily). Of local remedies, none are very efficient in the severe forms of the malady: laudanum, chloroform, and aconite (which must be cautiously employed) are the best (see Appendix). Subcutaneous injection of morphia, and the cautious use of galvanism, often prove beneficial. In some instances, division of the affected nerve has been followed by permanent relief; in others, this *dernier ressort* has altogether failed. Complete change of air and scene are not to be overlooked as remedies in this as in other forms of neuralgia.

**TOOTHACHE**—from which there are few persons who have never suffered—manifests every possible variety as regards severity and duration. It may be a purely neuralgic affection—when so, the pain is not generally limited to one tooth—to be relieved by such means as have already been detailed in connection with similar disorders; it may result from *caries*, or decaying action in the tooth where it is seated, to be remedied, possibly, by *stopping*, more likely by extraction; or it may be connected with inflammatory action, ending in the formation of matter in the tooth, and very generally implicating the gum in its immediate vicinity. This gives rise to much suffering. The application of warmth, flannel, or camomile poultices externally, and rinsing the mouth with warm water, tend to encourage the formation of the matter, which either finds its own way out—perhaps through the tooth itself, or at its side in the gum—or, if the abscess be large, it may, when fluctuation is distinct, be opened with a lancet.

To prevent decay of the teeth, nothing is of greater importance or service than constant attention to cleansing them; brushing with camphorated chalk tooth-powder, and occasionally with charcoal.

**TYPHUS AND TYPHOID FEVERS.** TYPHUS fever (from the Greek *tuphos*, stupor), like other diseases of the



class to which it belongs, is generally ushered in by certain sufficiently well-marked symptoms. Usually a person in the enjoyment of health becomes affected with shivering, and a feeling of general indisposition, including headache, uneasiness in the back—the sensation being often described as if water were passing down the spine. These are followed by febrile excitement, increased heat of skin and quickness of the pulse, thirst, and mental confusion. The tongue, which at first is more or less foul, shows a tendency to become dry, and in very severe cases is both dry and black in appearance. What is most remarkable in all cases of typhus fever, and is particularly seen in those which wear the most threatening aspect, is the implication of the nervous system. There is, as already stated, headache in the commencement; then succeeds a low, listless condition, the existence of which is indicated by the peculiar countenance of the patient, manifesting complete indifference. Before many days have passed, there occurs delirium, the wandering mind, which is usually, but by no means invariably, without agitation; and very frequently the tendency to stupor—in which condition, when confirmed, or coma, as it is called, not a few patients die.

The muscular strength in typhus soon becomes greatly exhausted. The patient is observed to lie on his back—rarely to turn; and when an advanced state of weakness exists, he sinks down in the bed. The latter is always to be looked upon as an unfavourable sign; while the circumstance of the patient having turned on his side is, on the other hand, to be regarded favourably. The failure of strength is further indicated by the feebleness or entire loss of the voice, the inability to swallow, and the convulsive startings of the tendons, as well as general tremulous movements of the muscles, and of whole limbs, or of the tongue.

In typhus, as in scarlet fever and measles, there is an eruption; but it is, generally speaking, not so readily discovered as in either of these diseases; and there is good reason for believing that typhus—certainly a form of continued fever closely resembling it—may exist without any eruption. From its peculiar colour, the eruption which ap-

pears in typhus fever is called the mulberry rash ; and sometimes it is characterized as a measly rash. Usually it presents itself before the completion of the first week of the disease ; but its appearance is sometimes delayed till the commencement of the second : ordinarily it remains visible till the conclusion of the fever. The rash is earliest, and almost invariably most distinctly, seen on the trunk of the body—over the belly, chest, and back—then on the limbs ; but it is not an uncommon circumstance to find it on the back of the hands and fingers.

Typhus fever seldom terminates before the fifteenth day—not unfrequently continues till near the close of the third week. The favourable termination of a case of typhus is evidenced by a gradual declension in the most marked symptoms : more particularly does the appearance of stupor in the countenance of the patient vanish, while an air of interest in what is going on about him declares itself. The frequent pulse becomes moderated, the heat of skin natural, and the dry furred tongue, first at the point and sides, begins to clean and become moist.

There are two ways in which typhus fever is apt to terminate fatally. The first, and perhaps the most common, is by coma (from the Greek *koma*, lethargy,—in use since the time of Hippocrates), or insensibility. This is the effect of the circulation in the blood of the fever poison, and the injurious operation it exerts on the brain. Death in this way may take place at a comparatively early period of the disease—not uncommonly about the tenth or twelfth day. In the case of persons who have led an intemperate life, having indulged freely in alcoholic drinks, this mode of fatal termination is peculiarly apt to occur. The other mode of death is by sinking ; and this is most likely to be the case when the conclusion of the second or commencement of the third week is reached : the pulse becomes more and more feeble, and at length ceases to beat. Any exertion in the advanced stage of fever is apt to cause the sudden failure of the heart's action ; and such must be most carefully avoided.

In the other form of fever mentioned at the commence-

ment of this article, or TYPHOID (from the Greek *tuphos*, stupor, and *eidos*, form or resemblance), as now generally understood, there is more or less decided evidence of intestinal complication, especially of affection seated in the glandular structure of the bowels. This variety of fever has been carefully investigated of late years, and more particularly by the distinguished French physician M. Louis, and by Sir William Jenner and Dr. Murchison of London. To Sir William Jenner belongs the merit of having pointed out that it is, in reality, perfectly distinct from typhus fever.

The most remarkable symptoms of this fever are connected with the bowels. There is generally pain, which may be slight, but oftentimes is severe, a tumid condition of the belly, and diarrhoea. The evacuations are usually pale, often resembling pea-soup: after a time, in some, fortunately not in all—for this is an unfavourable sign—blood appears. The eruption over the skin is different from that of typhus: it is not measly and diffused as the latter is, but consists of sparsely distributed, rose-coloured, slightly elevated spots, which, appearing towards the end of the first week, are to be recognized chiefly over the belly and chest, and comparatively seldom upon the extremities.

Typhoid fever, which often passes under the popular name of “gastric fever,” does not commence in the abrupt manner in which typhus fever does: in it the patient has generally been complaining for some days, it may be weeks, before he is compelled to take to bed. Nor does it terminate in so decided a manner as typhus often does, by a critical evacuation, as a general perspiration: in it amendment is a very slow and gradual process, whose commencement is often difficult, if not impossible, to recognize.

There can be little doubt that both of the forms of fever now briefly described are capable of communication from the sick to the sound; but typhus is propagated much more readily than typhoid. The poison of typhus appears to originate from the overcrowding of human beings together; that of typhoid from changes induced in accumulations of fecal matter.



The general tendency of disease to recovery is abundantly evidenced in typhus as well as in typhoid fever; but just as clear is the manifestation in both, in many cases, to an unfavourable termination. All cases of typhus and typhoid fever are therefore to be carefully watched: there are many ways in which the physician is able, by a judicious course, to influence the disease favourably.

In the outset of typhus, the state of the bowels usually suggests the administration of a dose of laxative medicine; this, too, is often followed by good effect. In the latter, the tendency to diarrhœa may only be manifested after the exhibition of such medicine; in every case, therefore, when anything like a suspicion of its being typhoid exists, laxative medicine must be administered in very sparing amount (a single teaspoonful of castor oil). By sponging of the surface of the body with vinegar and cold water, and application of cold to the head, the general discomfort and headache of the earlier days, in both fevers, may be mitigated. Pain in the belly, or tenderness, in typhoid fever, is best met by the employment of warm fomentations. The restlessness and delirium at night are often relieved by the exhibition of a little muriate of morphia in solution with antimonial wine; such, however, must be administered with great caution. When there is a tendency to coma, the suitable remedies are stimulating injections (spirit of turpentine, half-an-ounce), shaving the head, and the application of a blister to it. When any marked declension of the circulation appears, as evidenced by coolness of the surface and failure of the pulse, then stimulants are to be administered,—wine or brandy, and ammonia, which may be given as the sesquicarbonate, in doses of three or five grains to an adult, every three or four hours. In the diarrhœa of the typhoid fever, when slight, lime-water is the most suitable remedy; when more severe, chalk mixture, with a little laudanum, may be substituted; when blood appears, more decided astringent remedies are demanded,—gallic acid, or acetate of lead. The condition of the bladder must always be observed in cases of fever attended by insensibility or an approach to it; the



urine is apt to be retained, and may require to be withdrawn by the catheter.

In typhus fever, pulmonary complications are not unusual; and of these, bronchitis and inflammation of the lung substance are the chief. In such circumstances, depressing remedies are, generally speaking, inadmissible, and the more stimulating expectorants (ammonia and decoction of senega) are to be employed, with counter-irritation by mustard or rising blisters.

Fever patients should lie on hair mattresses, in rooms well aired, and subject as thoroughly as possible to ventilation. In typhus, more particularly when protracted, there is a great tendency to the formation of bed sores on the back and hips: washing the skin with rum or other spirit tends to prevent this; when such have formed, the application of a soft poultice is required.

**VOMITING** is a symptom common to many disorders; these may be seated in the stomach, or in almost every organ of the body. When vomiting occurs persistently, it is always important to make a special investigation into the condition of such organs as the liver and kidneys; it is also a frequent symptom in disease of the brain. It occurs as the result of peculiar influences exerted on the nervous system, as in the early stage of small-pox and other febrile diseases, in pregnancy, and when certain unusual positions of the body are assumed, or unaccustomed motions are made. By far the most frequent cause of vomiting, however, is irritation in the stomach; and this may be dependent on various forms of organic disease, or simply due to some temporary cause, as the presence of indigestible food, &c. The act of vomiting is generally, though by no means invariably, preceded by a peculiar uneasiness experienced in the stomach; nausea or sickness, this is called. Sometimes a state of great depression is induced, as if the person were about to faint.

In endeavouring to relieve or remove vomiting, regard must always be had to the particular condition on which it

depends; when consequent on a disordered state of other organs than the stomach, it is to the one affected that attention is to be paid. That variety of vomiting which depends on the presence of some irritating substance in the stomach—as, for example, bile—is often relieved by subjecting the organ to a thorough cleansing; for this purpose nothing is better than warm water: a tumblerful should be swallowed; it may be speedily rejected, or it may remain; in either case the vomiting usually ceases. When this has been attended to, the application of a mustard poultice over the stomach, and the exhibition of opium (one grain, or a few drops of the solution of muriate of morphia, or of Battley's sedative solution) tend still further to settle the stomach. Effervescing powders (see Appendix) prove grateful to the patient suffering in this way, and exert a beneficial action as well. Various remedies, a brief notice of which will be found in the Appendix, are in common use for the relief of vomiting when dependent on functional disorder; such are ice, chloroform, compound tincture of cardamoms, sal volatile, creasote, garlic, &c.

**VOMITING OF BLOOD.** The escape of blood by an effort of vomiting is to be carefully distinguished—and this is not always easy—from the expectoration of blood. In the former case the blood will be generally found to be dark, and in the form of clots, frequently mixed with the contents of the stomach: these particulars, together with the circumstance of an effort similar to that of ordinary vomiting having accompanied the discharge of blood, generally serve to distinguish it from the bright red blood, often frothy, and mixed with mucus, which is brought up by coughing.

Vomiting of blood may be connected with various forms of disease seated in the stomach, the liver, spleen, &c.; it may arise, too, from disease in important blood-vessels connected with these organs. To one form of vomiting of blood, of not very uncommon occurrence, incidental reference has already been made (p. 168), when it is vicarious of the menstrual discharge.

In all cases of vomiting of blood, the patient should be placed in the recumbent posture, in bed, and perfect quiet enjoined. The hands and feet should be kept warm by being placed in hot water; and mustard poultices may, for a brief time, be applied to the calves. Cold, by means of cloths or ice, may, if the amount of blood lost be considerable, be applied over the stomach. The internal remedies most likely to be of service in controlling the bleeding are acetate of lead and gallic acid, alone, or combined with a little opium (see Appendix). The bowels, moreover, should be acted on when there exist symptoms indicative of derangement of the liver and spleen, such as pain, and sense of fulness in the right or left side: it may indeed be proper to purge freely; for this purpose sulphate of magnesia (Epsom salts), or Henry's solution thereof, is as useful as any other remedy. After a time, small doses of calomel may be administered. When the bleeding from the stomach replaces the menstrual discharge, the great object is to restore the latter.

In all cases in which a tendency to vomiting of blood exists, great attention should be paid to diet: only what is light, most easy of digestion, is to be allowed; milk with lime-water, the white of eggs, and, after a time, animal soups and jellies, are most suitable.

**WATER-BRASH** is one of the symptoms, and not the least unpleasant, of indigestion; though, according to Cullen, it may occur independently. Usually, pain in the stomach, after taking food, is succeeded by the eructation of a thin watery fluid, in considerable amount, and possessing a bitter taste. Sometimes water-brash is dependent on organic disease of the stomach, and therefore irremediable. When connected with other symptoms of indigestion, and due to functional derangement merely, great care must be exercised in regard to diet: a too exclusively farinaceous (oat-meal) or vegetable diet is apt to produce it,—such must be avoided. A judicious selection of articles, both vegetable and animal, is most likely to agree.

One of the most useful remedies in this disorder is bismuth, of which ten grains taken in a little milk before each meal is the proper dose; other suitable medicines are aromatic powder, compound kino powder, and pepsine (see Appendix).

**WATER IN THE HEAD.** The most remarkable symptom connected with this form of disease is the increased or increasing size of the head. The aspect of the child thus affected is most peculiar: the greatly enlarged head surmounting the little face, which only rarely undergoes any relative increase, and the sad expression of the countenance, once seen, will not readily be forgotten. A child suffering from water in the head, if arrived at a walking age, is apt to stagger from side to side; and, as the disease advances, to feel himself unable to walk at all. The head is held stiffly, or, as is often the case, is supported with the hands, or rested on some object. When pain occurs, and it is often paroxysmal, the child screams. Among other marked symptoms is the failure of sight, of smell, and of hearing: these, in their occurrence, precede the more serious indications of squinting, vomiting, convulsive movements, or true convulsions, and the tendency to drowsy stupor, which, sooner or later, terminates in coma, and that in death.

The duration of the disease is extremely various; it most frequently occurs in early infancy, before the bones of the skull are united, and the subjects of it rarely indeed survive the period of childhood.

Water in the head is a form of dropsy, and in a great number of cases is caused by the pressure of a tumour, very often tubercular, upon the veins of the brain. When evidently associated with the markedly scrofulous constitution, little can be expected from treatment in this disease. Remedies which act in increasing the flow of urine should be administered. From mechanical interference, by compression of the head, and the operation of tapping, removing the fluid by means of a small trocar, good results have been obtained in a limited number of instances.



**WHITES.** The affection passing under this name, from which females suffer, is characterized by the discharge of a white milky fluid from the womb, dependent on irritation seated there. When present in a marked degree, the menstrual discharge is either scanty, and accompanied by much pain, or it is entirely suppressed. In certain cases the white discharge immediately succeeds the normal menstrual flow; in others it precedes it, and is checked by the occurrence of the latter.

Females suffering from the whites are often unhealthy in appearance, the complexion being sallow and often pale, with an expression of great languor. A peculiar uneasiness, often a kind of gnawing pain, is experienced in the lower part of the back, and the patient is unable to walk,—sometimes is rendered unfit to maintain the erect posture. Appetite is lost, and the health generally is often much depressed.

Persons who are subject to rheumatism and gout are apt to be affected by this form of ailment: it often takes its rise after pregnancy or delivery, or is connected with some form or other of irregularity in the function of the parts. A careful inquiry into the history of each individual case is required, in order to determine the probable cause of its commencement.

In the treatment of this affection, special care must be directed to the state of the general health—that must be maintained by suitable diet, and tonic remedies; specially under the latter head rank the preparations of iron. The hip-bath, with cold water, and the bracing measure of the shower-bath, are often salutary. Something, too, is to be done by local means: the greatest attention to cleanliness is necessary; and the injection, by means of the female syringe, either of cold water, or of a solution of alum (two drachms to half an ounce of alum in the quart of water), or the decoction of oak bark, is often serviceable. Local pain and uneasiness may be relieved by the use of anodyne liniments (chloroform or belladonna), and rest in the recumbent posture.

**WHITLOW**, an inflammation of the finger (from the Saxon *hwit*, white, and *low*, a flame). This is a very common, and oftentimes a very painful, affection. Among no class of persons is it more frequent than servants, who are constantly engaged in using the fingers. The severity of the inflammation in whitlow varies considerably. There is a mild form, which generally yields to fomentation with hot-water cloths; and, if matter forms, whenever it is relieved by the lancet, speedily heals: but there is a much more formidable affection, in which the deep textures of the finger are involved, accompanied by severe pain, throbbing, and much redness, heat, and swelling. This form of whitlow is only to be relieved by free and early incisions with the lancet; for if this be neglected, the bones are affected, and they become destroyed.

**WORMS.** There are several species of worms which inhabit the bowels of man. One of these is found chiefly, though not exclusively, in early life; it is the commonly called thread-worm, which, in great numbers, are often passed in the form of balls. They are the cause of very great irritation. The best method of relieving the sufferer from this peculiar disorder is by the administration of injections: for this purpose the infusion of quassia is very suitable,—the bitter acts as a poison to these little creatures. Lime-water, used in the same manner, is often an efficacious remedy. Laxative medicines are less powerful, but it is well also to act upon the bowels by them: for this purpose, castor oil, turpentine, and santonin, the last in doses of 2 to 6 grains in sugar of milk, may be administered.

A second variety of worms, and also frequent in its occurrence, resembles the common earth-worm: its existence is often inferred from the marked derangement of the general health; the belly being swollen, the appetite capricious, the breath bad, and there being pains in the stomach and bowels and irritation at the end of the nose. If the worm reaches the stomach, then vomiting is superadded, and, not very unfrequently, it is got rid of in this way. For its re-

moval, it is well to purge the patient with compound jalap powder, and then to give iron in some form or other repeatedly, which is peculiarly distasteful to these parasites.

A third form of worm is the long jointed animal to which the name of tape-worm is applied. The symptoms caused by its presence are very much the same, though in a more aggravated degree, as those due to the variety of worm just described, with the addition of pains in the limbs and great physical depression, as well as impairment of nervous energy. Fragments of the worm, of varying degrees in length, are also frequently passed. Among the best remedies for this worm are turpentine (a tablespoonful, with or without an equal quantity of castor oil), decoction of the bark of pomegranate-root, kousso, extract of male shield fern, and kamala (see Appendix).

## PART II.

### HINTS TO BE FOLLOWED IN CASES OF EMERGENCY.

ARRANGED IN ALPHABETICAL ORDER.

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**BLEEDING.** When from a cut or wound there is considerable bleeding, the means most efficacious for its arrestment is pressure applied directly over the part. Portions of lint formed into a compress should be placed over the source of the bleeding, and retained in position by a bandage firmly adjusted. When blood escapes from an artery, the application of a ligature round the wounded vessel is often required; but until the assistance of the surgeon is procured, pressure should be had recourse to; and in addition, if the bleeding be from a limb, a tight bandage should be placed round it, a little nearer the trunk than the site of the bleeding. Bleeding from leech bites, particularly in children, is sometimes difficult to stop; a small portion of lint, just sufficient to cover the wound, should be placed over the bite, and very firm pressure exerted with the finger. If this fails, the wound should be touched with the point of a pencil of lunar caustic.

**BRUISES** are contusions or hurts upon the flesh; they, of course, vary very greatly in severity and in danger, according to the part of the body where they are inflicted. Though, properly speaking, external injuries, bruises may be accompanied by internal lacerations, or other mischief. When a severe bruise of any part of the body has been sustained, the sufferer should, for some time,—at least a period of days,—remain perfectly quiet, and give rest specially to



the bruised part. When fainting, or an approach to the condition of swooning, has accompanied or speedily succeeded the infliction of the bruise, the reclined posture should be assumed, and reaction may be brought about by the very cautious administration of stimulants,—a little wine or brandy. It is because inflammation is apt to follow a severe bruise that, after such injury, the patient should be kept quiet, and allowed a spare diet only, so as, if possible, to avert the threatening consequences. In less severe injuries, when swelling with pain and stiffness are its most troublesome results, besides rest, fomentations with hot water, or with sugar of lead and opium lotion, may be applied; and when the pain has subsided, if much swelling, with the familiar black and blue hue over the part remains, a solution of muriate of ammonia (see Appendix) may be employed; afterwards, gentle friction and bandaging.

**BURNS AND SCALDS.** Injuries produced by solid substances at a high temperature are called Burns; those caused by heated fluids, Scalds. Of the former, the worst are produced by explosive materials, such as gunpowder, and by the body-clothes catching fire. It is indeed lamentable to reflect how many serious and fatal accidents are occasioned to females every year by the incautious approach made to fire, and to children by the foolish manner in which they amuse themselves with flame. The most severe scalds are due to boiling water or other fluids, in use either for domestic purposes, or, and more frequently, in some large chemical manufactory.

The danger of severe burns and scalds is proportionate to their extent, and also to the part of the body implicated. Those of the trunk, neck, and head are generally more formidable than of the extremities. When a person's clothes are ignited, the great object is to shut off, as speedily as possible, the approach of air to the burning substance; instead, therefore, of walking or running about, thereby fanning the flames, the sufferer should fall on the floor, and, by rolling and turning about on the ground, endeavour to

smother them. If assistance is at hand, the sufferer should, as quickly as possible, be completely covered with a rug, table-cloth, curtain, or other woollen or stuff article at hand.

The pain caused by a severe burn or scald is generally extreme. When recently inflicted, nothing tends more decidedly to soothe or deaden the suffering than cold water. The burnt part should therefore be immediately placed in cold water, or thin cloths dipped in cold water should be applied, and frequently renewed, over the injured surface.\* After the lapse of a short time, when the cold fails to relieve, the burnt parts are to be completely enveloped in cotton wadding, and thereby as thoroughly as possible protected from the contact of the atmosphere. This application is generally to be continued for days. If blisters form, the elevated scarf-skin may be gently punctured in a few places, so as to give vent to the thin watery fluid underneath. It should not, however, be altogether removed, but allowed to fall down over the injured skin underlying it. In process of time, a raw or ulcerated surface is disclosed, to which portions of lint dipped in warm water, and covered with oil-silk, should be applied, and renewed at least once in the twenty-four hours. When a burn has been caused by gunpowder or other explosive mixtures, it is necessary to effect, as much as possible, the removal of the irritating particles of such substances by means of poultices.

Many cases of severe burns require careful constitutional as well as local treatment. Fever is apt to supervene. This is to be met by suitable remedies; while the general uneasiness and restlessness which often accompany the local pain are to be relieved by opiates—a little laudanum or morphia.

**CHOKING.** The presence of foreign bodies in the gullet, from their size causing pressure on the windpipe, may endanger life. In such circumstances, the efforts of the sufferer to swallow may cause the passage of the obstructing sub-

\* A mixture of linseed-oil and lime-water forms an emulsion (the *linimentum aquæ calcis*, or carron oil), well known as a once favourite remedy in recent burns, and still, indeed, much employed.

stance downwards into the stomach. If so, all is well. The uneasy sensation at the seat of its arrestment may continue for a short time, but ultimately passes away. If the efforts of the sufferer, however, as is often the case, only cause the offending substance to shift its place upwards or downwards to a slight extent, assistance is required. If the person has choked upon a piece of food, it is proper to push the substance downwards into the stomach. This is best effected by means of the probang, a surgical instrument made of whalebone. If this, as is most likely, be not at hand, any long portion of whalebone may be substituted for it. Impending suffocation has, in such circumstances, been relieved by a person, full of presence of mind, rapidly removing from an umbrella—which is to be found in most lobbies—one of the pieces of whalebone, and introducing it into the gullet. When, in using such an instrument, the foreign body is reached, it is to be pushed by it gently downwards. When the impacted body is of an indigestible or irritating nature—as, for example, a piece of money—instead of being pushed downwards, it is better, if the necessary instrument is at hand—a pair of long curved forceps—to effect its removal.

**DISLOCATIONS AND FRACTURES.** The former injuries consist in the removal of bones from their position in the joints; the latter, in the rupture or breaking of bones. These may be simple, in which case the bone is merely divided; or compound, when, besides the solution of continuity in the bone, the soft parts or integuments in connection with the fracture are lacerated. The joints most subject to dislocation are those of the extremities; and, including the collar-bones, it is the bones of the limbs, also, which are most frequently fractured. The restoration of the bone to its proper position is sometimes a matter of ease, but at others it is attended by no small difficulty. The sooner attempts at reduction are made after the accident which has caused the dislocation, the better; they are then more certain to be followed by success. The same observation

applies to the case of fractures ; the setting of these is best effected as soon as possible after the reception of the injury.

For the treatment of both injuries, experience and skill are required. It is of great importance, till the assistance of such be obtained, that the injured parts be placed in a position at once the most comfortable to the sufferer, and in which a further injury is least apt to occur. The recumbent posture should, as a general rule, be maintained ; and in the instance of fracture, all motion of the broken bone should be prevented by the application of splints, made of wood or pasteboard, along the limb, retained by a firm bandage. If the fracture be a compound one, and bleeding to any extent has occurred, a handkerchief should be tied very tightly round the limb, above the seat of fracture, and a pledget of lint wrung out of cold water applied over it. In the reduction of dislocations, in order to remove the counteracting effect of the muscles, it is not uncommon to place the patient under the influence of chloroform. Fractures of the skull are usually very formidable accidents, giving rise to symptoms of injury of the brain.

**DROWNING.** In this mode of death the fatal event arises from the obstruction of air to the lungs, owing to the submersion of the nose and mouth, the portals for its entrance. As the immediate consequence of this obstruction, the blood sent to the lungs to undergo the vivifying change which converts it into arterial blood remains non-arterialized, and in that condition stagnates in these organs. For a brief time, however, it is returned in a certain amount to the left side of the heart, and from thence sent over the body. Venous blood cannot maintain the action and vitality of the brain or spinal cord, or other organs, so that sensibility and voluntary motion soon cease. The heart, however, continues to beat ; and while it does, there is hope of restoring life.

In endeavouring to restore suspended animation in one who has been submersed, the great particular to attend to is the respiration—the renewal of the action of the lungs. All efforts should, for a time, be concentrated upon it. This is



partially effected by the alternate production and relaxation of pressure over the walls of the chest. It is still more efficiently done after the method suggested by the late Dr. Marshall Hall; the body is to be turned, in a free atmosphere, on its face—this allows the tongue to fall forward (its tendency to fall backward often prevents respiration when the posture of the body is not attended to)—and then successively from the face to the side; in other words, semi-rotation is diligently to be made: or by that of Sylvester, which consists in expanding the thorax by alternately lifting the arms above the head, and bringing them down so as to press them on the sides. The application of warmth is altogether of minor importance, and it must be done with great caution; 60° to 70° Fahr. is a sufficiently warm temperature. The wet clothes may be removed, and the surface of the body dried, while the attempts to restore breathing are being carried on. Of eight cases of drowning, in which the period of submersion varied from five to twenty minutes, this plan was successful in seven; in only one it failed. In three of these no less a period than sixty, forty, and thirty minutes respectively elapsed, after treatment was begun, until respiration was fairly established.

### INSENSIBILITY FROM INTOXICATING DRINKS.

The condition of coma resulting from Apoplexy (see under that head, p. 8) may readily be confounded with the insensibility produced by too free indulgence in intoxicating drinks, and with poisoning by opium (see under *Poisoning by Opium*, p. 234). It is of great consequence, however, to distinguish them. The inquiry should always be made into the history and circumstances of such doubtful cases, whether the person so affected has been drinking, or is likely to have taken poison at his own hand. If the insensibility be due to intoxication, the odour of the breath will generally determine it; for as long as the oppression of the brain continues, so long does the alcohol pass off by the lungs. When there is no distinct odour of any alcoholic liquor, it may be presumed that the symptoms do not de-

pend on intoxication. It must, however, be held in remembrance, that the combination of a fall or blow sustained on the head by a person in a partially inebriated condition, may determine a profound state of insensibility. The pupils of the eyes are dilated, often very much so, offering a contrast to the contracted pupils in poisoning by opium.

In all doubtful cases it is well to err on the safe side ; and if there be a reasonable suspicion as to the existence of alcoholic liquor in the stomach, the attempt to remove it should be made, for thereby the best chance of saving life is had recourse to. The proper treatment, then, is the use of the stomach-pump as early as possible, to remove the contents of the stomach ; dashing cold water over the surface of the body, and injecting a little of the same into the ears, so as to rouse the individual. Ammonia may further be applied to the nostrils, and strong coffee thrown into the stomach.

**POISONING.** A poison may be defined to be an agent which is capable of producing a noxious or dangerous effect upon a living being, or of depriving that being of life. There are three great classes of poisons, namely, *Irritants*, *Narcotics*, and *Narcotico-Irritants*. The *first* class produce their peculiar effects on the stomach and bowels, causing much irritation and inflammation. Some poisons of this class corrode the tissues with which they come in contact,—such, for example, is the action of the mineral acids ; others, possessing no corrosive action, simply irritate and inflame,—of this nature is arsenic. The *second* class affect the brain and spinal cord ; the phenomena they induce are headache, giddiness, palsy, and insensibility : the most familiar example is opium. The *third* class, in conformity with the name, possess a double action ; they give rise to great irritation in the alimentary canal, like the first class, and after a time operate like the second on the nervous system, in producing insensibility and convulsions : strychnine and aconite are of this nature. The antidotes, or, in default of such, the proper method of treatment in accidental poisoning by the

more common substances, will be here briefly mentioned, under the three divisions of poisons already adverted to.

1. IRRITANT POISONS.—*Oxalic Acid*. Antidotes are chalk, compound chalk powder, magnesia, or carbonate of magnesia mixed with water, lime-water. If there has been much fluid swallowed, the stomach-pump should be employed, and the stomach well washed out with lime-water.—*Phosphorus* (lucifer matches, which children are apt, in playing with, to put in their mouths). Treatment: Give white of eggs beat up with magnesia, and let vomiting be induced by warm water; also free purging.—*Arsenic*. Vomiting is one of the common symptoms of poisoning by this agent; if, as sometimes happens, it does not occur, attempts must be made to induce it by giving an emetic (sulphate of zinc, 15 or 20 grains; or mustard, two teaspoonfuls in a glass of water), and aiding its operation with milk or linseed tea. The stomach-pump may be employed. A mixture of equal parts of oil and lime-water may be exhibited, whereby the poison is rendered less soluble; or a combination of milk, lime-water, and white of egg. By some, the hydrated sesquioxide of iron is believed to be an antidote to arsenic; by others, the hydrate of magnesia is supposed to possess a similar virtue.—*Sugar of Lead* (acetate of lead). Treatment: Give freely a solution of sulphate of soda, or sulphate of magnesia; an innocuous sulphate of lead is thus formed. If vomiting has not occurred, an emetic should be administered (sulphate of zinc). Milk or white of egg may also be given.—*Verdigris* (sub-acetate of copper). This, like the other salts of copper, produces violent vomiting; the emetic effect should be aided in treatment, by giving freely warm water and milk, or by the use of the stomach-pump. Sugar is supposed by some to be an antidote.

2. NARCOTIC POISONS.—*Opium*. When opium or laudanum has been taken in too large a dose, there follow giddiness, tendency to sleep, and stupor, which gradually deepens, and at length becomes profound: the individual in this state cannot be roused; his breathing is slow and snoring; the pupils of the eyes are contracted and insensible to light. In

treatment, the grand object is to remove the poison from the stomach. If the person can swallow, an emetic (sulphate of zinc, or mustard, or common salt, the latter of which are nearly sure to be at hand), with plenty of warm water, should be administered; if the state of insensibility prevents the act of swallowing, then recourse must be had to the stomach-pump. Cold water should be dashed over the surface of the body; it may also be injected into the ears. Beating the palms of the hands and soles of the feet, and the application of strong mustard poultices to the limbs, may prove useful. If the individual be seen in the drowsy state, before insensibility has been produced, it is of the utmost consequence to prevent the establishment of that condition; and this is best effected by causing him to walk up and down in a cool apartment, with the assistance of two persons, one on either side. The application of the electro-galvanic current is a powerful means of rousing the nervous energy, which is dormant; and direct efforts to maintain respiration (see under *Drowning*, p. 231) should not be neglected.—*Prussic Acid* (contained in oil of bitter almonds, &c.). Treatment: The employment of stimulants; ammonia held to the nostrils; friction over the chest with camphorated liniments. For a poison so speedy in its operation, no antidote can be of much avail; the best, however, is the administration of carbonate of potash, followed by the mixed sulphates of iron, whereby the poison is converted into Prussian blue: this was suggested by the Messrs. Smith of Edinburgh.—*Henbane*. Free use of emetics (sulphate of zinc and warm water).

3. NARCOTICO-IRRITANT POISONS.—*Laburnum* (seeds and bark; the former are not unpleasant to the taste, and are frequently eaten by children). Emetics.—*Fox-glove* (digitalis). Emetics, followed by the exhibition of vegetable infusions containing tannin, as catechu, galls, and kino; they render the active principle (digitaline) insoluble.—*Meadow Saffron* (colchicum). If taken in over-dose, requires the free use of diluents (barley-water), and then opiates to relieve the irritation in the bowels it occasions.—*Monkshead* (aconite.)



With this powerful poison fatal accidents have occurred, as in the melancholy tragedy at Dingwall, from mistaking the root for that of horse-radish. Emetics (sulphate of zinc), and the stomach-pump should be employed.—*Deadly Nightshade* (belladonna). After emetics have been used, there seems reason to believe that the employment of opium (laudanum) in ordinary but repeated doses, may promote recovery.

The reader is referred, for abundance of information upon the subject of Poisons, to the works of Sir Robert Christison and Dr. Taylor.

**SPRAINS** are produced by overstraining of the muscles or tendons in the neighbourhood of a joint. They are often attended by severe pain, and followed by much swelling and deformity. The ankles, perhaps, suffer more frequently than any other parts—the foot is twisted inwards, and then the pain and swelling result on its outer surface. Sprains of no great severity in the first instance, are often very considerably aggravated by the incautious use made of the foot, immediately or soon after the injury has been sustained. The great remedy in sprains is rest: when severe, rest for days, to save weeks; the main adjuvant, warm fomentation. If there is much swelling and pain, a few leeches may be applied; when these have subsided, bathing with cold water, and the use of a firm bandage, are serviceable. Walking should, for a considerable time, be only sparingly indulged.

## PART III.

### SUGGESTIONS REGARDING THE MANAGEMENT OF THE SICK-ROOM, INCLUDING THE PREPARATION AND APPLICATION OF CERTAIN REMEDIES.

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It cannot be too constantly held in remembrance that the beneficial action of remedies in diseases is only secondary to the operations of Nature. There is a tendency in most maladies to a spontaneous favourable termination, or, in other words, to recovery; and the great object to be kept in view in their treatment is, so to dispose the patient that, to the fullest extent, this wise and bountiful provision of Nature may be made available. In some diseases, and more especially in acute inflammations and febrile disorders, this favourable tendency is more clearly discerned than in others. But besides the element of recovery now adverted to, there is equally clearly visible, in many diseases, an unfavourable tendency—one towards death; and this it is the province of the physician, by the judicious employment of all the means in his power, if possible, to avert. A meddlesome interference with her own processes Nature is apt to resent; the timely use of many remedies is, on the other hand, frequently so very evidently efficacious as to satisfy all candid and capable minds of the eminent usefulness of the healing art. The exhibition of medicines, though in many cases a most important part, is still only a part of the required treatment of diseases: there are many other equally important particulars which demand attention in the management of the sick-room. To some of these, though it must necessarily be in general terms only, reference will now be made.

**THE SICK-ROOM:** *Its Ventilation and Temperature, &c.*  
—If it be necessary, for the due maintenance of health, that these particulars in the choice of an apartment be attended to, equally if not more important is it in the management of the sick-room, that they are not neglected.

A room of tolerable dimensions—large rather than small, possessing, in this country, a southern exposure, neither apt to be unduly heated by the sun, nor, on the other hand, rendered dull from its absence, is the kind of apartment most suitable for the sick. It is still more appropriate if, in immediate connection with such a room, there be another, and that may be of smaller size, in which a nurse or attendant may sleep, and the various little operations—culinary, and in the preparation of medicines, &c.—may be carried on without the risk of annoying the invalid.

In the sick-room there should certainly be a fire-place—that essential for all proper ventilation; in summer weather, supposing the season to be genial, to remain open, not closed up, as is often seen, by a wooden board; in winter, occupied by a moderate fire.

The temperature of the sick-room should be kept as equal and steady as possible; there will always, however, be a range of some extent; the object is to keep that as moderate as can be; from 60 degrees Fahr.—that is, five degrees above temperate—to 65 degrees of the same scale, may be allowed as the most suitable, though it will often be found that, even with the exercise of much care, the temperature either falls below or rises above these points. The safest method for speedily reducing the temperature, if it has risen too high, is by keeping the outer door of the apartment open; or if there be the second room, the convenience of which has been already referred to, the window in it may be kept open for a short time, while the door of communication between the rooms is so also. If it be necessary to open the window of the sick-room, it had better always be done from above, and while the door of the apartment is closed.

*Bed.*—Whatever the precise fashion or shape of the patient's bed is, it should be so constructed as to permit the

free circulation about it of the air in the room. Four-posted beds, with curtains, are the least desirable: a simple iron bedstead, furnished with a curtain which can be readily withdrawn, and which, when closed, does not make a very near approach to the patient, is perhaps the most so. The bed should be so placed as not to stand directly in the way of any draught which, for the purpose of ventilation, it may be necessary to create; it should, if possible, not occupy a position directly between the entrance door and the fireplace, or between the window and the fireplace. In bed, the patient should lie with the back to the window. A hair mattress is, upon the whole, the most suitable for all patients; a feather-bed never so. Straw is preferable to that.

As regards the requisite or suitable amount of bed-clothing, a difference must be allowed to exist, according to the precise nature of the malady from which the patient suffers. In febrile and inflammatory diseases, specially such as are accompanied by great heat of skin, the patient is very intolerant of covering; and unless there be some exceptional reason in the case, such as an unusual susceptibility to be affected by cold, Nature's promptings—for such they are—may be attended to and acted upon. Generally speaking, the patient is the best judge of the amount of coverings required. In the early stage of the eruptive febrile complaints—measles, for example—the coverings should be ampler, until such time as the eruption is fully developed, than there is any occasion for thereafter; though, in the instance cited, measles, as already stated (p. 166), all due precautions against exposure to cold must be adopted.

It is scarcely necessary to observe, that the room occupied by the patient should be as completely as possible removed from the inconvenience of noise. There are many ailments which are peculiarly apt to be aggravated by sudden or loud noises, such as fevers, and all forms of nervous maladies. Gas is, generally speaking, a great comfort in the sick-room, if it be so arranged as to be readily screened, because, with many patients, there is a great intolerance of light.



**REMEDIES:** *Their Preparation and Application.*—A few general observations on the preparation and administration of such remedies as are not specially referred to in the Appendix, will now be added. Frequent references have been made throughout this little work to the curative powers of Nature; and the statement has often been made that one great aim of the physician is to watch her operations, and to see that no circumstance occurs in any degree calculated to interfere with the salutary efforts she makes. At the same time there are many diseases over which remedies have unquestionable power; and in their proper place, several of these have already been adverted to, and will be more fully mentioned in the Appendix which follows.

It is customary to speak of remedies under the two heads of external applications, and medicines properly so called, administered internally. Under the former are included some very important means, to which recourse is frequently had in the treatment of many forms of ailments, both severe and comparatively trivial. Of such are those which cause redness, irritation, and blistering of the skin; and the most commonly employed are the mustard poultice, turpentine stupes, and the fly blister. There are, moreover, a large number of liniments, some of which are specially employed for the relief of pain (anodyne, as, for example, chloroform liniment), others as stimulating embrocations (opodeldoc, and Bow's liniment); and plasters, as of opium and belladonna, soap, and Burgundy pitch.

*Mustard Poultice.*—For the preparation of the mustard poultice or sinapism, as much water should be added to a certain quantity of mustard as will, on being well mixed, form it into a thin paste; this is to be spread out over a portion of cambric, muslin, or fine cotton, covered with another piece, and thus applied over the part, whether that be the throat, chest, or stomach, &c. To produce the desired effect, which is generally manifested by a considerable degree of redness, and by a feeling of heat and discomfort, the sinapism requires to be applied for from twenty to thirty minutes

(in case of children, a shorter time suffices). The poultice being removed, a little cotton wadding, or a linen or cambric handkerchief may be placed over the part for a brief period. The addition of bread crumbs serves to diminish, that of a little vinegar to increase, the irritating power of the mustard.

*Turpentine* is best applied over a flannel cloth which has been dipped in hot water, and then thoroughly wrung; for this purpose one or two tablespoonfuls of the spirit are generally sufficient.

*A Rising Blister* (cantharides, Spanish flies) may, of course, be made of various dimensions and shapes, according to the part of the body it is required to cover. Usually it is necessary for a period of ten hours to elapse before the cuticle is raised over a collection of serous fluid,—if applied at bedtime, a blister may, generally speaking, be considered as ready for removal at an early hour the following morning. When the scarf-skin is raised, it may be gently punctured with a needle, or cut with a pair of scissors, and, as the fluid drains away, permitted to fall down. Cotton wadding should then be applied, and allowed to remain till the blistered surface becomes dry. In the case of children of tender years, fly blisters are to be regarded as unsuitable applications.

Respecting internal remedies, allusion to such facts as are specially important to be held in remembrance will be made in the Appendix. There are, for example, certain medicines which exert their curative power most efficiently when taken before, others when taken after food. Some are best taken in the morning, others at midday or at night. It is best to administer certain medicines in a simple form; others act most efficaciously when combined. The solid state is the more suitable for some; the fluid condition for others. Without entering into any further explanation on these points, the best modes for the administration of such remedies as have been cited in the work will be shortly stated in the Appendix.

## PART IV.

### SUGGESTIONS AS TO THE PRESERVATION OF HEALTH (DIET, EXERCISE, SLEEP, &c.).

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THE prevention of disease is a subject of interest equally personal and important as that of its cure. It is certainly not going too far to say, that a very large amount of disease, and therefore of death, is preventable. Specially does this hold true of those affections which are most apt to occur in infancy and childhood, and which, possibly originating in such causes as neglect and want of proper management and care, are at all events rendered infinitely more serious and fatal through their instrumentality. Public attention is fortunately of late much more directed to the important subject of hygiene; and there are comparatively few persons of any education who do not now see the immense influence which habits of domestic and personal cleanliness, a free atmosphere, well-regulated drainage, proper clothing, and sufficient as well as wholesome nourishment, have on the comfort and health of individuals, and, through them, indirectly, on those of the community at large. A few brief observations will now be made upon certain of the most important particulars in relation to the preservation of health.

**DIET.** While by common consent it is acknowledged that certain circumstances, and more especially age, render a great difference in diet absolutely necessary, there can be no manner of doubt that far too little allowance is generally made for the very various positions, circumstances, and relations of individuals, in respect to this most essential point.

The diet of the infant, Nature, with unerring wisdom, has provided; and she has indicated, by those remarkable changes in the mouth, to which reference has been made in Part I. (*Teething*, p. 208), when it is that other articles of food are to be employed. These should, in the first instance, be farinaceous alone,—rusk, arrow-root, sago, rice, being the chief and most suitable; and with such and such like, cow's milk being substituted, after weaning, for the mother's or nurse's, may the child during the first two or three years of life be fed. There may occur circumstances rendering the occasional—even frequent—employment of other articles (animal soups, for example) requisite; but in the case of a healthy child the former restricted plan is vastly preferable. While yet a child—in other words, during the first seven years—unless to meet certain indications, it is well to permit the farinaceous articles to enter largely into the diet as a whole: these, including bread, with well-cooked vegetable broth, animal soup, the lighter vegetables, and the gravy of roasted meat, should be the staple; tender chop and steak, or fowl, the occasional, or even frequent, varieties.

There comes a time—and the occurrence of the second dentition must be regarded as marking it—when the regular use of more substantial food is required; and, after the sixth year, it is probable that the due admixture of animal and vegetable food is the most suitable and appropriate diet. An early hour of the day is best suited for the principal meal of children. The growing youth, with keen appetite, often requires to be repressed rather than encouraged in respect to food, though there is no doubt that, at such a time, a liberal allowance of what is nourishing is demanded.

Of ordinary animal food, beef and mutton are the most nutritious; and, when well cooked—particularly roasted—may be considered as easily digested as any other. Old meat is certainly preferable to young in both respects,—beef to veal, mutton to lamb. Roast surpasses boiled, and stewed is inferior to both. Steak and chop, with roast beef and mutton, form the very best varieties. White flesh (fowls



and game) is an excellent occasional substitute for so-called butcher-meat; so also is white fish.

It is undoubtedly easier for the stomach, and therefore, generally speaking, a better plan, to partake in moderation, at dinner, of a few different articles, rather than to be restricted to one. A dinner composed of a little soup, followed by a moderate allowance of beef-steak, mutton or beef, roasted or otherwise cooked, or one composed of white fish with any of the articles named, is better than if the whole repast had consisted of beef-steak, which, under such circumstances, with a good appetite, would be likely to be taken in too large amount. While beef and mutton are specially referred to, a variety may be secured from time to time by substituting pork, veal, lamb, venison, &c.

A well-cooked pudding is a wholesome addition to dinner; pastry and dumplings, "*et hoc genus omne*," should be only moderately, and very occasionally, indulged in. Fruits, as dessert, or at an earlier part of the day, are not merely agreeable, but, in the case of many persons, exert a salutary effect;—strawberries (the cream and sugar are not necessary), gooseberries, currants, &c., in summer; figs and prunes, &c., during the winter season.

For the proper exercise of the function of digestion, it is very necessary to observe regularity in meals,—not to make long fasts,—not to be in a hurry when eating, and so bolt the food; but, by careful mastication, commit it to the stomach already as well prepared as the teeth can (and ought) to make it for digestion there. It should be always remembered that, when food has reached the stomach, it remains there for some time, undergoing a process of solution. This process takes, in health, as a general rule, from two to three hours; and while it lasts, nothing more in the way of food should be taken. It is a very injurious habit, to make, as is so common in this country, a regular meal at tea, some hour or so after a hearty dinner. The introduction of bread and butter into the stomach so soon after animal food has been swallowed, serves to delay the digestive process, and hence arises all manner of uneasiness and gastric disturb-

ance. A far better plan is, two hours after dinner, to take a single cup of warm tea or coffee; and if the former meal has been made at an early hour of the day, and more food is required, let a light supper, at a later—though not late—hour be made.

**STIMULANTS.** The question as to the habitual use of stimulants is of great importance, but, owing to the marked difference of opinion which exists regarding it, one not easily settled. Upon the whole, it will be generally acknowledged that the number of persons who are in any degree dependent on the use of stimulants for the enjoyment of good health, and specially for the proper performance of the digestive function, is comparatively small; while the great majority of those who habitually indulge in wines or other stimulating drinks, in no wise require them as necessary articles of diet. But it must, on the other hand, be admitted, that the moderate employment of stimulating drinks is not only favourable, but even necessary, for the due maintenance of health in certain individuals. There is very high authority for the use of wine in such circumstances; and the labours of the chemist have satisfactorily demonstrated, that, by preventing the waste of the animal tissues, alcoholic liquors act, at least indirectly, as food: they sustain the powers of life. Wine is at all times best taken along with solid food. Some of the lighter kinds of French and German wines might, with great advantage, be substituted for our heavy and heady port and sherry.

**EXERCISE.** As contributing to the preservation of health, nothing is of greater importance than regular daily exercise in the open air. This must, of course, be suited in degree to the strength of different individuals. For the robust, the long walk, or one or other of those athletic pursuits and games so common in this country, is suitable, care being taken that over-fatigue is not habitually induced; for those whose bodily strength is unequal to such exertion, a short walk, or regular passive exercise on horseback or in

a carriage, is to be recommended. Who shall say how many ailments, grave as well as comparatively trivial, are capable of being warded off by moderate exercise in the open air! Here the poet speaks most truly:—

“He ’scapes the best, who, nature to repair,  
Draws physick from the fields in draughts of vital air.”

**THE BATH.** The daily use of the bath is another important means of preserving the health. It should be taken cold unless the individual (and this is of quite exceptional occurrence) has an unusual susceptibility to the influence of cold applied over the surface of the body, in which case the water should be tepid. A period of five or seven minutes is sufficient for bathing: during that period, the use of the bath for the purpose of cleanliness is perfectly secured; and then, standing in the water, the upper part of the body should be quickly dried by means of a coarse towel; and being covered, the feet and lower limbs may then be attended to: thus the liability to take cold in any form is greatly obviated.

**CLOTHING.** There are few particulars in which a greater tendency to commit errors exists than as regards suitable clothing; more especially are persons liable to be careless in respect to the usual changing of apparel on the approach of winter and summer, the former particularly. As a general rule, flannel may be considered, in our climate, as the most suitable article to wear next the skin: its bad conducting power of heat renders it the warmest vesture in winter, the coolest in summer; in the latter season, moreover, it readily absorbs the perspiration, and is, on that account, much more comfortable than either linen or cotton. There is in some persons’ minds a prejudice against it, which it were well in all cases to remove. Many require to be seriously cautioned against too quickly and suddenly displacing the garments of winter by the lighter coverings of summer, whenever a genial change in the weather occurs; the latter, in our climate, often proves quite transitory, being again succeeded by cold, and thus many ailments are originated.

**SLEEP.** What is the due amount of sleep required for a healthy person? This varies considerably, according to age and occupation: the child requires more than the man; the adult whose brain and bodily powers are daily taxed, requires more than the man who lives easily and works little. There are also very remarkable individual peculiarities as regards the requisite amount of sleep. One person feels refreshed as completely by four as another does by seven hours' repose. The latter amount may be regarded as, on the whole, the maximum duration of sleep for an adult, in order that both mind and body may be maintained in the highest degree of vigour.

It is unnecessary again to refer to several particulars connected with the due maintenance of health, seeing that allusion has been made to these, under various heads, in Part I.

**CLIMATE.** The choice of climate more directly concerns the invalid than the individual blessed with good health; but the latter, in seeking to preserve one of Nature's choicest gifts, may have seriously to consider the question as to the most suitable residence *quoad hoc*. Let it be remembered that in almost all large towns a considerable variety in respect to climate exists; one part of a city is generally more sheltered than another. A choice, too, may be secured between a southern and a northern exposure; and, by selecting the former, an advantage to the extent of several degrees in temperature be secured. For the pulmonary invalid, the most desirable climate in Great Britain is to be found, during winter, at Torquay. In foreign countries, the south of Spain (Malaga), Madeira, and the Riviera are the most eligible. Egypt, of which much is now said, has disadvantages in the rapid daily and nightly alternations of temperature, and in the want of those comforts which the sick so much require.



## APPENDIX,

CONTAINING A LIST OF MEDICINES AND MEDICAL APPLIANCES MENTIONED IN THE PREVIOUS PARTS, THE PROPER DOSES OF THE FORMER BEING NOTED.

ARRANGED IN ALPHABETICAL ORDER.

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**Acetate of Lead.** A powerful astringent, useful in severe diarrhoea and dysentery, as the lead and opium pill, of which one or two may be given two or three times daily; useful also in spitting of blood, and in loss of blood from other parts. Dose, 2 to 4 grains, twice or thrice daily.

**Acetate of Potash.** To be given dissolved in water; is a diuretic and laxative, specially useful in acute rheumatism. Dose: from 20 to 60 grains for adults; 10 to 15 for children: may be given repeatedly at intervals of some hours.

**Aloes.** A bitter tonic and laxative; best administered as the aloes and iron pill, which is a valuable medicine (see p. 169).

**Alum.** A useful astringent; as a gargle in sore throat a strong solution may be employed, or the burnt powder blown through a tube over the part.

**Ammonia, Carbonate of.** A useful stimulant. Dose, 5 to 15 grains for an adult.

**Arsenic.** Referred to under the head of *Chorea* in Part I., p. 37; a valuable remedy, exhibited in the same manner, in many cases of cutaneous eruptions, particularly such as are scaly; also in chronic rheumatism.

**Barley Water.** Useful as a diluent, demulcent, and diuretic; to be made as a decoction with boiling water, and strained.

**Beberia, Sulphate of.** A serviceable tonic, much less expensive than quinine, and at times a good substitute for it. Dose, 1 to 3 grains repeatedly.

**Belladonna.** Dose of the extract, when used for the purpose of warding off scarlet fever, as follows: Dissolve 5 grains in one ounce of cinnamon water, and give of the solution 15 drops twice daily to a child of ten years old; less or more in proportion to age.

**Bi-Carbonate of Potash.** Antacid (and diuretic). Dose, 10 to 20 grains.

**Bi-Carbonate of Soda.** Similar in action and dose.

**Bismuth.** Useful in painful indigestion. Dose, 10 to 20 grains, in milk.

**Blood-letting** is general or local. The former is usually performed by opening a vein at the bend of the elbow. A ribbon or bandage is first of all to be placed on the arm, above the elbow, not very tightly, but sufficiently so to arrest the flow of the blood through the veins. When the bandage is applied the veins become very visible. One of these is to be carefully opened by means of the lancet; the vein to the outside is to be preferred: and when the required amount of blood is taken, the bandage being undone, a compress of lint is to be applied over the wound, and retained by means of a ribbon firmly passed round the elbow.—Local bleeding may be effected by cupping or by leeches. *Cupping* is performed with an instrument specially designed for the purpose; and when the wound is made, the glass is applied over it, being rendered adherent through the previous exhaustion of the air by means of the flame of a spirit-lamp. After cupping, a strip of adhesive plaster should be applied over the wound, in case of renewed bleeding. *Leeches*, if in water, should be well dried before being applied to the skin, and are apt to fasten most readily when a little cream is placed over the surface.

**Blue Pill.** A preparation of mercury. Dose, 4 grains. Useful in bilious headache, with confined condition of bowels.

**Bow's Liniment.** A useful external application in lumbago, rheumatism, sprains, &c.

**Bromide of Ammonium.** An excellent nervine sedative, procuring sleep, relaxing spasm, and relieving neuralgic pain. Much used in hooping-cough. Dose, 5 to 20 grains.

**Bromide of Potassium.** A valuable nervine sedative, producing sleep, relaxing spasm, and often relieving pain. Much used in epilepsy. Also used in uraemic convulsions and in asthma. It lowers nervous excitability, particularly of the generative functions. Dose, 15 to 60 grains.

**Calomel.** A mercurial preparation. Dose, as a purgative, 5 grains.

**Camphor.** A soothing remedy. Dose of mixture, a small wine-glassful.

**Cannabis Indica.** A nervine sedative, often useful in cases of sleeplessness, neuralgia, and spasm. Dose of the extract, quarter of a grain to one grain; of the tincture, 5 to 20 minims.

**Castor Oil.** The safest and one of the most efficacious of all laxative medicines. Ordinary dose, a tablespoonful; for a young child, a teaspoonful.

**Catechu, Tincture of.** Dose, a teaspoonful.

**Catheter.** An instrument for withdrawing water from the bladder.

**Caustic, Lunar.** Useful in many different ways. As an external application, in the removal of warts; applied to the throat, in cases of sore throat, as a solution, 20 grains to the ounce of water; and to the eye (see p. 175) in a much weaker form.

**Chalk Mixture.** Useful in diarrhoea. Dose, 2 tablespoonfuls repeatedly. A little laudanum or solution of muriate of morphia, or tincture of catechu or kino, may be conveniently given with the mixture.

**Chamomile Flowers** form a good soothing poultice. Place the flowers in a flannel bag, immerse that in hot water, wring, and then apply it to the pained part.

**Chloral Hydrate.** An excellent nervine sedative, procuring sleep, and relaxing spasm; useful in asthma, delirium tremens, locked jaw, and in many forms of sleeplessness. Dose, 10 to 40 grains. It should be prescribed with caution, and habitual use avoided.

**Chlorate of Potash.** Given in fevers, and other diseases attended by prostration of strength. Dose, 3 to 5 grains, repeatedly.

**Chloric Ether.** Useful as an antispasmodic in asthma. Dose, 25 to 30 drops, in a little water.

**Chlorine, Inhalation of the Vapour of,** was recommended by M. Gannal, as a remedy in catarrh and chronic bronchitis; the vapour being diffused through the apartment, or inhaled through hot water.

**Chlorine Water.** One or two tablespoonfuls in a tumblerful of warm water, most useful as a gargle in sore throat of scarlet fever or diphtheria.

**Chlorodyne.** A nostrum, often useful in allaying cough and difficulty of breathing. Dose, 5 drops, cautiously increased.

**Chloroform.** An invaluable agent; but should always be administered with extreme caution: for the purpose of producing insensibility to pain, is best administered on a common handkerchief, the person inhaling it being permitted to breathe some atmospheric air at the same time. Useful internally in sea-sickness (see p. 200).

**Citrine Ointment.** Of mild strength (the ointment varies). Useful in cases of ring-worm and other eruptions.

**Cod-liver Oil.** A most useful medicine, specially in scrofulous complaints; also in consumption and wasting diseases, and in rheumatism. The pale oil is preferable to the dark. Dr. De Jongh's of the Hague is much esteemed. Best given plain, immediately after meals. Some persons, however, can manage it best in the intervals of meals, or at night.

**Colchicum.** A useful remedy in gout and rheumatism. Requires to be cautiously administered, as it often produces severe pain in the bowels. Dose of the wine, 10 to 30 drops, twice or thrice daily.

**Cold.** Useful in many ways. Cloths dipped in cold water relieve headache, and tend to arrest bleeding; are of service in the dressing of ulcers and other sores; serviceable also in inflammatory affections of superficial parts, in early ophthalmia, &c.

**Cream of Tartar.** As a diuretic, 30 to 60 grains repeatedly in water; and as a laxative, in larger amount. Often used with sulphur for the latter purpose; a teaspoonful of the cream of tartar and half the quantity of sulphur, with treacle.

**Creasote.** Dose, 1 or 2 drops. Often useful in allaying vomiting and obstinate hiccough.

**Cusparia.** A useful tonic in convalescence from diarrhœa and dysentery. Dose of infusion, 1 or 2 wineglassfuls.

**Digitalis.** A powerful remedy, producing a tonic, and afterwards an apparently depressing action on the heart; useful in febrile diseases. It has another important action, namely, in increasing the flow of urine, for which purpose it is often employed. Allusion has been made in Part I. to its efficacy as a remedy in certain cases of spitting of blood in consumption. The proper doses of digitalis for adults are as follows: in powder, 1 or 2 grains; of its infusion, 2 teaspoonfuls to 2 tablespoonfuls; pill of digitalis and squill, 1 or 2. These preparations act most decidedly on the secretion of urine, as in dropsy;—the tincture more on the heart; its dose is 10 drops. Digitalis is what is called a cumulative medicine: its effects are sometimes not immediately produced; but each successive dose remaining in the system, these may be seen even after the medicine is discontinued. On this account, digitalis should be always carefully watched, and never given over a long period of time.

**Dover's Powder,** or compound ipecacuanha powder. Every ten grains of this valuable medicine contain one grain of opium and ipecacuanha each, and eight of sulphate of potash. Most useful in procuring perspiration; for which purpose it is best administered in a little warm gruel. Dose for an adult, 10 or 15 grains. The same preparation in pills, 3 for a dose.

**Dry Cupping.** A useful means of derivation and counter-irritation,



consisting in the application of the cupping-glasses over a part without abstraction of blood.

**Effervescing Powders.** Most pleasant consist of citric acid and bi-carbonate of potash or sesqui-carbonate of soda, in the proportion of 15 grains of citric acid to 25 of the former and 22 of the latter. Each powder should be dissolved separately in water, and the solutions mixed.

**Electrization** is a generic word for the application of electricity in the treatment of disease. The most important forms are *Faradization*—the currents of momentary duration discovered by Faraday to be generated or induced in a coil of copper-wire by the action upon it, under certain conditions, of a permanent magnet or of a voltaic current. The best form of instrument for this purpose is Stöhrer's induction machine. *Voltaization*—often termed Galvanism—is the electricity of chemical action. The best form of instrument is Foveaux's portable battery, made by Weiss and Son. In cases of diminished nervous power, both sensory and motor, electrization is often the means of effecting much benefit. The stimulation to muscular contraction which the battery produces, makes it an important means to employ in certain cases of suspended animation, in which the function of respiration tends to become arrested.

**Enemata.** See *Injections*.

**Ergotine.** A powerful astringent, obtained from the ergot of rye. It is best administered subcutaneously. Dose, 3 to 5 grains.

**Fomentations** are best applied by means of flannel cloths dipped in hot water, and then thoroughly wrung. Instead of flannel, what is sold under the name of *spongio piline* may be used. A dry cloth should always be placed between the fomentation and the patient's bed-clothes.

**Friction** may be simple or medicated, performed with the hand alone, or by means of a glove or brush, or with various oils and liniments. In many cases of rheumatic and gouty affections in their chronic form, in old sprains, in swellings connected with injuries and defective circulation, this method of external treatment is capable of doing much good. Friction, however, is not to be regarded as a remedial means applicable to all cases; and there is too much reason to fear that, in the hands of ignorant empirics, it has been, and continues to be, used in many cases for which it is entirely unfitted, and in not a few where its employment must be very injurious.

**Gall and Opium Ointment.** Useful in cases of external piles. A little to be applied over the part at bed-time, and again in the morning, if necessary.

**Gallic Acid.** A powerful astringent in cases of bleeding, particularly from the kidneys, the womb, or the lungs. Dose, 3 grains, repeatedly in such cases, to the extent of 30 grains in the day.

**Galvanism.** See *Electrization*.

**Glycerine.** As an internal remedy, useful in cases where cod-liver oil cannot be taken. Dose, a dessert-spoonful twice or thrice daily. As an external application, useful in many forms of cutaneous eruption and irritation. An ointment composed of glycerine and hog's lard, with a little chloroform added, is often serviceable in chilblains.

**Gregory's Mixture.** Compound rhubarb powder. An invaluable stomachic and laxative medicine. Dose, 1 or 2 teaspoonfuls.

**Grey Powder.** A mild mercurial preparation. Very useful as an alterative medicine in childhood, when the evacuations are pale and unhealthy. For this purpose, 2 or 3 grains, with a like quantity of rhubarb or magnesia, may be given for two or three times, on alternate evenings.

**Guaiacum.** A remedy in chronic rheumatism, pains in the bones, specially such as are increased at night, when the patient is warm in bed. Dose of powder, 10 grains; of decoction, a small wineglassful twice or thrice daily.

**Henbane** (*Hyoscyamus*). A soothing medicine, useful in procuring sleep. Medium dose of tincture for an adult, a teaspoonful. In nervous restlessness and watchfulness, a good prescription is the henbane, along with a small wineglassful of camphor mixture or julep.

**Henry's Salts.** Sulphate of magnesia or Epsom salts dissolved by the aid of a little additional sulphuric acid. An excellent purgative, and, properly managed, a most suitable medicine for regulating the bowels in cases of constipation. Dose, a tablespoonful or upwards in half a tumblerful of water. Often a less quantity, after a little time, suffices.

**Hydrocyanic**, or prussic acid diluted. A very powerful medicine, only to be used with great care. Has a soothing and tranquillizing effect in various ailments; subdues cough, allays vomiting, and, as an external application when added to lotion, relieves irritation of the skin. One or two drops are a sufficient dose for an adult. (See under *Hooping-cough*, p. 144, for its use in childhood.)

**Ice.** In allaying the sensation of sickness and relieving vomiting, few remedies are more serviceable than ice. It should be obtained in the form of a large block, wrapped in flannel, and deposited in a cool place. Small portions should be broken off by means of a hammer, and a piece from time to time placed in the patient's mouth. Ice is specially available when thirst and dryness of the

mouth exist. As an external application, ice is often useful; as, for example, over the head in severe headache or in the delirium of fever, and sometimes over the chest and belly when internal bleeding is occurring.

**Inhalation of Steam** is often very useful in sore throat, and in cases of loss of voice from cold. The patient should sit with the mouth open over a jug of boiling water, and draw in the steam which rises; or apply the mouth near (not exactly close to) the spout of a tea or coffee pot filled with boiling water. Chlorine water, in small quantity, may be added, so as to allow a little chlorine vapour to mingle with the steam. An inhaling apparatus, specially adapted for the purpose, is to be had for a very moderate sum.

**Injections** (or *Enemata*) may be divided into *Purgative*, *Astringent*, and *Nutrient*.—Of *purgative*, the one most commonly employed consists, for an adult, of castor oil, two or three tablespoonfuls, with a little salt, mixed in a pint or thereby of thin warm gruel. A tablespoonful or two of turpentine may be substituted for the castor oil, or added to the injection of which it forms a part.—Of *astringent* injections, the most frequently employed is that of laudanum and starch; a teaspoonful of the former to a small teacupful of thin solution of starch. This is useful in diarrhoea and dysentery.—Of *nutrient* injections, beef or mutton tea, alone or mixed with a little thin arrowroot, are the most frequent. One of the best forms of nutritive enemata is that suggested by Dr. Leube, prepared by chopping up 5 to 10 ounces of meat very finely, and adding one-third of its weight of finely minced pancreas, free from fat; the mixture being treated in a mortar with 5 ounces of lukewarm water, and reduced to a thick soup.—The most serviceable injection apparatus is the common india-rubber bag, with a small tube adapted: by compression and relaxation with the hand, while the nozzle is placed in the prepared injection, the filling of the bag is accomplished. The end of the tube, coated with oil, is to be carefully introduced into the bowel, the patient lying on the back or side, and by alternately pressing and withholding pressure over the bag, the contained fluid most readily passes. After being cautiously withdrawn, a sheet or some folds of linen or cotton cloth should be applied pretty firmly over the seat.

**Iodide of Potassium.** Dose, 2 to 5 grains, thrice daily. See *Lead Poisoning*, Part I., p. 43, for its use in larger doses.

**Iodine.** See *Iodide of Potassium*; and under *Iron*, Syrup of the Iodide of Iron.

**Ipecacuanha.** A useful medicine in many ways—the safest of ordinary emetics. Very serviceable as an expectorant and diapho-



retic. To produce the first effect—that of vomiting—20 grains of the powder, or a dessert-spoonful of the wine of ipecacuanha, are the proper doses for an adult. In case of children, 10 or 15 drops of the wine, given every ten minutes, with some warm water, is the best plan to follow in endeavouring to produce its emetic action; as an expectorant, 1 or 2 grains of the powder or 20 or 30 drops of the wine are the proper doses for adults. For the production of perspiration, the compound powder (see *Dover's Powder*) is best.

**Iron.** One of the most valuable and generally applicable of all medicines. Many references have been made to its employment under different heads in Part I. Among its numerous preparations, mention may be made of the following:—*Steel Wine* (Vinum Ferri); dose, a teaspoonful in water, for a child, twice daily. *Syrup of the Iodide of Iron*; dose, 10 to 20 drops in water for a child (30 and upwards for an adult), twice or thrice daily. *Sulphate of Iron*; dose, 1 or 2 grains. (With aloes, in the form of pill, 1 or 2 for a dose.) *Tincture of the Perchloride of Iron*; 10 to 20 drops in water thrice daily (see for further use under *Erysipelas*, in Part I., p. 116). *Citrate of Iron and Quinine*—a valuable tonic; dose, 2 or 3 grains thrice daily. *Saccharine Carbonate of Iron*; dose, 5 to 10 grains (best given in the form of pill). *Liquor of the Pernitrate of Iron*; 10 to 20 drops.—The preparations of iron are best taken shortly after meals.

**Jalap.** A useful purgative. Dose of simple jalap powder for an adult, 10 to 25 grains; of compound jalap powder (which consists of one part jalap and two of cream of tartar), half a teaspoonful to a whole teaspoonful.

**James's Powder.** An antimonial preparation; is known chiefly as a nostrum, "True James's Powder." Useful as a febrifuge remedy, producing perspiration. Dose, 3 to 6 grains every four hours; for children, 2 grains.

**Kamala.** A remedy in tape-worm; has a purgative action. Dose, 2 teaspoonfuls of the powder: best administered in milk or a little glycerine.

**Kousso.** A remedy in tape-worm. Dose of the dried flowers of the tree, quarter of an ounce.

**Laudanum.** One of the most useful of all the various preparations of opium. Medium dose for an adult, 15 to 25 drops.

**Lime Water.** A valuable antacid, useful in acidity of stomach; very much so (along with sweet milk) in the diarrhoea of children. Dose, a tablespoonful or two repeatedly.

**Liquorice Powder Compound.** A popular aperient combination, composed of senna with liquorice and sugar. The German powder



contains also sulphur and fennel, and is a better preparation than the British. Dose, a teaspoonful.

**Lobelia.** An antispasmodic remedy. Dose, a teaspoonful of the tincture, in water, for an adult.

**Logwood.** Powerful astringent. Dose, a wineglassful of decoction.

**Magnesia.** An antacid and laxative, specially suitable in childhood. For adults, the dose is 10 grains for the former purpose; 20 or 30 for the latter. For children, as a laxative, 3 to 10 grains. Best administered in milk.

**Male Shield Fern.** A remedy in tape-worm. Dose of the extract, 12 to 18 grains, followed in the morning by a dose of castor oil.

**Matico.** A useful external application, in order to restrain bleeding, as from leech-bites. The back part of the leaf, covered with hairs, or the powdered leaves, should be placed over the bleeding point.

**Mercury.** One of the most valuable medicines; requiring, however, great care and discrimination in its employment. See *Blue Pill* and *Calomel*.

**Mindererus Spirit** (liquor, acetatis ammoniæ). A very effectual and safe febrifuge remedy, taking its name from a German physician, Dr. Minderer, who used it extensively. Dose, a teaspoonful, in water, for a child; a tablespoonful, in water, for an adult.

**Morphia.** A preparation of opium, and useful in the same way. The solutions of the acetate and hydrochlorate are chiefly employed. The medium dose of the hydrochlorate, for an adult, is 15 to 25 drops.

**Naphtha, Medicinal.** Useful in allaying vomiting. Dose, 3 or 5 drops in a little iced water.

**Nitrate of Silver.** See *Caustic*.

**Nitrous Æther** (sweet spirits of nitre). A stimulant, antispasmodic, diaphoretic, and diuretic medicine. With decoction of barley, is very useful in relieving some cases of suppression of urine. Dose, 30 drops to a teaspoonful, repeatedly.

**Nux Vomica.** Powder of nux vomica is a valuable bitter stomachic. Dose, 5 grains, twice or thrice daily. Extract, in doses of one-third or a half-grain, with 2 grains of extract of rhubarb or aloes, is useful as a gentle laxative in cases of constipation.

**Oil of Croton.** A powerful purgative. Dose, 1 or 2 drops, mixed with sugar, or made into a pill with bread crumb.

**Opium.** See *Laudanum*, *Morphia*, *Paregoric*. Opium in all its forms should be administered to children only with extreme caution.

**Opodeldoc.** A useful external application in sprains, cases of chronic rheumatism, &c.

**Paregoric** (what mitigates or assuages pain). There are two remedies known under this name, the English and the Scotch. The ordinary dose of the former (*tinctura opii camphorata*) is one or two teaspoonfuls; of the latter (*tinctura opii ammoniata*), half a teaspoonful.

**Peppermint.** A useful carminative, removing flatulence of stomach and bowels. Dose, of its spirit, 20 drops; of the water, 2 tablespoonfuls; of the oil, 2 drops.

**Pepsine.** A useful stomachic remedy, quickening digestion and creating appetite. Boudault's pepsine is the best. Dose, 15 grains, between two thin slices of bread and butter.

**Phosphate of Lime.** An American preparation, under the name of compound syrup of the phosphates, contains this among other salts: useful as a tonic, specially for children. Dose, a tea-spoonful to a dessert-spoonful, twice or thrice daily.

**Quinine** (sulphate of quinine). Valuable tonic remedy; in doses of 1 to 3 grains, dissolved in water, with the addition of a few drops of diluted sulphuric acid, thrice daily (see, under *Brow Ague*, p. 21; and *Intermittent Fever*, p. 160).

**Salts** (Epsom salts, sulphate of magnesia). Purgative dose, 2 teaspoonfuls and upwards.

**Sal Volatile** (aromatic spirit of ammonia). A stimulant and antispasmodic; 20 drops to a small teaspoonful, in water, with a little sugar.

**Santonin.** A crystalline principle obtained from *Artemisia santonica*. Useful both in cases of tape-worm and thread-worm. Dose, 2 to 6 grains with sugar of milk.

**Senega.** A stimulant. Dose of the infusion, a small wineglassful, at intervals of some hours.

**Senna.** A powerful laxative. Doses of chief preparations are as follows:—Compound tincture, a tablespoonful or two; syrup of senna, a tablespoonful; infusion of senna, two tablespoonfuls at least (for children, one-half the quantity of each).

**Seton** is the name given to a cord or twist of silk introduced under the skin of any particular part of the body, and suffered to remain, in order that, for the purpose of relieving some internal organ, a purulent discharge may be established and kept up. A common place for the introduction of setons is the nape of the neck. A seton needle, or broad lancet, is employed for the purpose of entering the cord.

**Soap Liniment**, alone, or along with other liniments, forms an excellent embrocation.

**Soap Plaster**, applied over chest or back, is serviceable in cases of colds and other pectoral complaints.

**Squills.** Expectorant and diuretic. Dose of powder, 1 or 2 grains; pills, 1 or 2; syrup of squills, a teaspoonful.

**Steel Wine.** See *Iron*.

**Stomach-Pump,** to the employment of which recourse is had frequently in cases of poisoning, consists of a long tube, which is carefully passed down into the stomach; and, when fairly entered there, the patient's body is bent, and the mouth brought on a lower level than the stomach; thus the fluid contents of the organ flow out. It is well, in all cases where this means is employed, to inject warm water, not once, but repeatedly, in order thoroughly to cleanse the stomach. The ordinary stomach-pump has a syringe attached, by the action of which the contents of the stomach, after the tube has been passed, are evacuated. This instrument requires to be used with great care.

**Strychnia.** A powerful nervine tonic. Actions corresponding to those of *nux vomica*. Dose, one-thirtieth of a grain. To be used very cautiously.

**Sulphur.** Medium dose, as a laxative for an adult, small teaspoonful: usefully combined with an equal quantity of cream of tartar, and mixed with treacle.

**Taraxacum** (dandelion). A useful alterative medicine, specially in cases where the function of the liver is at fault. Dose of fluid extract, a dessert-spoonful, twice daily.

**Tartar Emetic** (potassio-tartrate of antimony). A most valuable remedy, possessing the properties of an emetic, diaphoretic, febrifuge, and sedative. To produce an emetic action, 1 grain of tartar emetic is usually combined with 20 of ipecacuanha powder, while the patient is directed to drink freely of warm water. In doses of one-sixth, one-fourth, and half a grain, the remedy dissolved in water; or, as the antimonial wine, in doses of twenty or thirty drops, is used to produce its other effects.

**Turpentine.** A purgative, useful in cases of intestinal worms: best administered along with castor oil—a small tablespoonful of each being the dose for an adult. The turpentine liniment is a useful external application. (For external application, see also p. 241.)

**Vaccination.** The means of protection afforded against small-pox, which should be universally practised. The operation of vaccination is best effected by means of Dr. Graham Weir's vaccinator. A few scratches on the outer aspect of the upper arm, midway between the shoulder and elbow, just sufficient to allow a drop of blood to be seen, are to be made, and then the vaccine lymph carefully applied. The arm should be allowed to dry thoroughly before being covered. If the vaccination succeed, there will be nothing

visible, except a slight trace of the wound, till the third or fourth day after the operation, when a little redness may be detected; on the fifth, a small vesicle will be discerned; this undergoes enlargement, and on the following day (sixth) is surrounded by a narrow red line; on the seventh day, the vesicle is well formed, of a round or oval shape; on the eighth and ninth, the red border extends, and the central vesicle enlarges—the vaccination is then at its height; on the tenth or eleventh day declension has begun; and, by the twelfth, a pustule, with a scab, has resulted. Gradually this darkens, becomes dry, and separates. Often there is a good deal of local irritation and constitutional disturbance accompanying vaccination. When these result, flour or violet puff should be applied to the arm, and a little cooling medicine administered.

**Valerian.** An antispasmodic remedy, often given in hysteria. Dose of ammoniated tincture of valerian, the preparation usually employed, a small teaspoonful, in water.

**Warm Bath.** Under various heads in Part I. the value of the warm bath as a remedy has been referred to. The temperature of the warm bath should not be higher than 100 degrees Fahr. for an adult; a few degrees lower for a young child.

**Worm Seed.** See *Santonin*.

**Zinc.** Chiefly used in the form of oxide and sulphate. The latter is one of the most speedy of the emetic remedies, and is generally used in cases of poisoning: its dose for this purpose, 20 grains; as a tonic and astringent, 1 to 4 grains: has been used with advantage in chorea and other convulsive disorders.





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